MELSEC System Q

Programmable Logic Controllers

User's Manual

QJ71WS96
Web Server Module

Art. no.: 149241
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SH (NA)-080320
Version D

• SAFETY PRECAUTIONS •

(Be sure to read these instructions before using the product.)

Before using this product, read this manual and the relevant manuals introduced in this manual carefully and handle the product correctly with full attention to safety.
Note that these precautions apply only to this product. Refer to the user's manual of the CPU module for the PLC system safety precautions.
In this manual, the safety instructions are ranked as "DANGER" and "CAUTION".

DANGER	Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.
CAUTION	Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.

Note that failure to observe the CAUTION level instructions may lead to serious results depending on the circumstances.
Be sure to observe the instructions of both levels to ensure personal safety.
Please keep this manual in an accessible place and be sure to forward it to the end user.

[Design Instructions]

DANGER

- When controlling a running PLC (e.g. modifying data), establish an interlock circuit in a sequence program for safety of the overall system.
  Also, be sure to read the manual carefully and ensure safety before making controls such as change of operation status.
  Especially, when controlling a PLC from a remote location via the Internet, problems on the PLC side may not be dealt with promptly due to abnormal data communication.
  Establish an interlock circuit in a sequence program.
- For the operation status of each station in the event of a communication error in the data link, see the manual for each data link.
  Failure to do so can cause an accident due to false output or malfunction.
- When the e-mail function is utilized, it may take time to send e-mail or is disabled depending on the status of the send server, transmission path, receive server and/or receive device.
  To ensure the safety of the PLC system, provide calling circuits using lamps and buzzers.
- Provide a safety circuit outside the PLC so that safety of the whole system can be ensured against an external power failure or PLC failure.
  Failure to do so may cause an accident due to false output or malfunction.
- If it is necessary to ensure the security of the PLC system against unauthorized and illegal access from external devices via the Internet, appropriate measures (firewall, etc.) must be taken by the user.

[Design Instructions]

⚠ DANGER

- Do not write any data into the "System area" of the buffer memory of the intelligent function module.
  Also, do not output (turn on) the "Use prohibited" signal, which is one of the output signals from the PLC CPU to the intelligent function module.
  If data is written to the "System area" or the "Use prohibited" signal is output, there is a risk that the PLC system may malfunction.

⚠ CAUTION

- Do not bundle the control lines or communication cables together with the main circuit or power lines, or bring them close to each other.
  The distance of 100mm (3.9inch) or more should be ensured.
  Failure to do so may cause malfunctions due to noise.
- Do not power off a station where this module is mounted and do not reset the PLC CPU while storing the settings into the standard ROM of the module using a Web browser.
  This may make the data unstable within the standard ROM and require resetting and re-storing, or it may cause a failure or malfunctions of the module.

[Installation Precautions]

⚠ CAUTION

- Use the PLC in the environment specified in the user's manual of the CPU module.
  Failure to do so may cause electric shock, fires, malfunctions, product deterioration or damage.
- While pressing the installation lever located at the bottom of module, insert the module fixing tab into the fixing hole in the base unit until it stops. Then, securely mount the module with the fixing hole as a supporting point.
  Incorrect mounting may cause malfunctions, failures or a fall of the module.
  The module should be secured with screws in an environment of frequent vibration.
- Before mounting/dismounting the module, be sure to shut off all phases of external power supply used by the system.
  Failure to do so may damage the module.
- Tighten the screws within the specified torque range.
  Loose tightening may cause a fall, short circuits, or malfunctions.
  Overtightening may damage the screws and/or the module, resulting in a fall of the module, short circuits or malfunctions.
- Do not directly touch the conductive part or electronic components of the module.
  This may cause malfunctions or a failure of the module.

[Installation Precautions]

⚠ CAUTION
• For connector wiring, correctly press, pressure-weld or solder the connecting part by using the tool specified by the manufacturer. Poor connection may cause short circuits, fires or malfunctions. • Be sure to set the Compact Flash™ card by pressing it into the Compact Flash™ card slot. Confirm it is completely set. Poor contact may lead to malfunctions.

[Wiring Instructions]

⚠ CAUTION
• Be sure to fix communication cables and power cables to the module by ducts or clamps. Failure to do so may cause damage of the module or the cables due to accidental pull or unintentional shifting of the cable, or malfunctions due to poor contact of the cables. • Connect the connectors to the module securely. • Tighten the terminal screws within the specified torque range. Loose tightening may result in a fall short circuits or malfunctions. Overtightening may cause damage to the screws and/or the module, resulting in a fall, short circuits or malfunctions. • Do not hold the communication cable by hand when pulling it out from the module. Be sure to hold the connector by hand, when removing the cable with a connector from the module. Failure to do so may cause malfunctions or damage to the module or cable. • Be careful not to let foreign matter such as dust or wire chips get inside the module. This may cause a fire, failure or malfunctions. • A protection label is attached to cover the upper part of a module to prevent the entry of foreign matter. Do not remove the label during wiring. However, be sure to remove it for heat dissipation during system operation.

[Startup/Maintenance Instructions]

⚠ DANGER
• Do not touch the terminals while the power is on. Doing so may cause malfunctions. • Before cleaning up and retightening terminal screws and module mounting screws, be sure to shut off all phases of external power supply used by the system. Failure to do so can cause the failure or malfunctions of module. Loose tightening may cause a fall, short-circuits, or malfunctions of the module. Overtightening may damage the screws and module and cause a fall, short-circuits, or malfunctions of the module.

[Startup/Maintenance Instructions]

⚠ CAUTION

- Never disassemble or modify the module.
  This may cause failure, malfunctions, injuries or a fire.
- Before mounting/dismounting the module, be sure to shut off all phases of external power supply used by the system.
  Failure to do so may cause failure or malfunctions of the module.
- Do not mount/remove the module onto/from base unit more than 50 times (IEC61131-2-compliant), after the first use of the product.
  Failure to do so may cause the module to malfunction due to poor contact of connector.
- Do not drop the battery installed to the module, and do not give it a shock.
  Doing so may damage the battery, causing battery fluid leakage in the battery.
  If the battery has been dropped or given a shock, do not use it but dispose of it.
- Always make sure to touch the grounded metal to discharge the electricity charged in the body, etc., before touching the module.
  Failure to do so may cause a failure or malfunctions of the module.

[Operating Precautions]

⚠ DANGER

- Before controlling a running PLC (e.g. modifying data), fully ensure safety.
- Do not write any data into the "System area" of the buffer memory of the intelligent function module.
  Also, do not output (turn on) the "Use prohibited" signal, which is one of the output signals from the PLC CPU to the intelligent function module.
  If data is written to the "System area" or the "Use prohibited" signal is output, there is a risk that the PLC system may malfunction.

[Disposal Instructions]

⚠ CAUTION

- Dispose of this product as industrial waste.

[Transportation Precautions]

⚠ CAUTION

- When transporting lithium batteries, make sure to treat them based on the transport regulations. (Refer to Appendix 8 for details of the controlled models.)

REVISIONS

* The manual number is given on the bottom left of the back cover.

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Operating Instructions

This section explains the precautions in the following order.
1) Precautions for network connection
2) Precautions for performance/specifications
3) Precautions for security
4) Precautions for tag function
5) Precautions for logging function
6) Precautions for user screen creating function
7) Precautions for other functions
8) Precautions for access to Web server module
9) Precautions for battery
10) Precautions for using Compact Flash™ card

Precautions for network connection

(1) Infrastructure for Internet connection
For devices applicable to the Web server module for the Internet connection or Internet service providers, refer to Section 2.4.
Note that Internet connection of the Web server module may not be available in some regions or in some countries depending on the Internet infrastructure.
In this case, please consult your local Mitsubishi service center or representative.

(2) Connection to mail server or FTP server
Powering on the PLC immediately after powering it off may cause failure to connect to the mail server or FTP server. After powering it off, wait for several minutes before turning it on.

Precautions for performance and specifications

(1) Number of writes to standard ROM (flash ROM)
Data can be written to the same area of a standard ROM up to 100,000 times, and there are some write restrictions (standard ROM drive life).
Refer to Section 3.1 Remarks (1) for the life of the standard ROM drive and how to check the used condition.

(2) Time handled by Web server module (Refer to Section 3.9)
Transfer delay may occur since the Web server module acquires the clock data from CPU No.1 at the following timings.
• When the PLC is powered off and then on or CPU module is reset
• Once per minute

Precautions for security

(1) Security of the Web server module
The Web server module supports the basic authentication (account setting) by the user name and password and the IP filter function, however, it does not prevent all of illegal access from the outside.
Preventive measures must be taken by users against illegal access to ensure the PLC system safety. (Refer to Section 4.6.5 (3))

(2) Remote password function of QCPU

The remote password function of the QCPU is not used for the Web server module.

When restricting access to the QCPU, use the user authentication function of the Web server module.

Precautions for tag function

(1) Tag setting and component setting (Refer to Section 6.3.3)

(a) When a component setting is deleted, the settings of the components after the deleted setting No. are shifted up.

When the component has been set in the user part of the user screen creation function, reexamine the parameters since the setting No. is changed. (Refer to Chapter 7 for user part details.)

(b) If a component has a wrong device number in the component setting, the other component that will obtain the device of the same access target CPU will result in an error. Check the device number set in the component setting.

(c) If the data type is set as "String" in the component setting, device values may be replaced.

(2) Tag sampled at high speed

(a) Be sure to create a user-set system area in the program memory of the control CPU. (Refer to REMARKS in Section 6.3.3.)

(b) "Sampling: High speed" can be registered to only one tag. (Multiple setting is not allowed)

(c) The access target CPU of the tag component selected to execute "Sampling: High speed" is the access target CPU setting No. 1 (control CPU). (Fixed)

(d) Total points of 96 or less can be set for the devices of the tag component selected to execute "Sampling: High speed".

Precautions for logging function

(1) Logging setting (Refer to Section 6.4.4)

(a) When the logging file storage has been set to the standard ROM, pay attention to the free user area of the standard ROM or the number of writes to standard ROM.

(b) E-mail transmission/File transfer requires several to several tens of seconds depending on the network line and data size.

Depending on the logging setting, the target file may be deleted before e-mail transmission or file transfer is completed.

Examine the settings, such as the timing, file capacity and number of saved files to increase the time to file deletion.

(2) High-speed logging
(a) Be sure to create a user-set system area in the program memory of the control CPU. (Refer to REMARKS in Section 6.3.3.)
(b) A delay may occur in the logging interval depending on the scan time of the control CPU and the time of access from a peripheral device/intelligent function module to the PLC CPU.

Precautions for user screen creating function

(1) User parts
(a) Be sure to set the must-be-set parameters of the user parts.
Failure to do so will result in an error.
(b) The file names and parameters of the user parts are not case sensitive.
(c) When the contents of a user screen have been changed, delete the temporary Internet files (cache), and then read the user screen on the Web browser.
(Refer to Section 6.2.7 (1) for how to delete the temporary Internet files.)
(d) The device value corresponding to the tag component specified in the user parts parameter must be retained for a time longer than the tag collection interval and communication time in the sequence program.
(Especially, be careful when accessing the user screen via the Internet.)
When the retention time of the device value is too short, value change may not be displayed in user parts accurately.

(2) Sample screens
Sample screens for the user parts are available in the /ROM/WWW/USER/ directory of the Web server module.
Delete all sample screen files before starting actual operation. (To prevent write to the devices using the sample screens)
The sample screens can be restored by initializing the module. (Refer to Section 4.13.)

Precautions for other functions

(1) Account setting (Refer to Section 4.6.5)
After completion of initial setting, make sure to register at least one account with administrator authority, and then connect to the network.

(2) IP filter setting (Refer to Section 4.6.6)
(a) When using a mail server, FTP server, DHCP server, DNS server and/or router, do not block the IP packets of these devices.
To do so will disable communication with the above devices.
(b) When a proxy server exists on the LAN, block the IP address of the proxy server. If the IP packet from the proxy server is passed, access to the Web server module is available from a personal computer that can access the proxy server regardless of the other setting.
(c) When accessing the Web server module from a personal computer on the LAN, do not use the proxy server.

(3) Access target CPU setting (Refer to Section 4.6.7)

(a) Web server module requires preparatory time to communicate with the access target CPU when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset. Therefore, it may take several minutes before the communication will be available if many access target CPUs are set.
Confirm that the setting update has been completed or the Web server module has been ready (X0 is on), and make access from the personal computer to the Web server module.

(b) Carefully set the "PLC series" of the access target CPU setting.
A wrong "PLC series" setting will generate an error in the PLC CPU or module on the route to the access target CPU, and a response time-out error (error code: 0002h) is displayed on the Web server module.

(4) Event setting (Refer to Section 6.5.3)

When the display form of the component is set to "Exponential" in the tag event setting, a rounding error is produced in the range outside the number of digits set in the number of decimal places.
Hence, when the exponential form component is set in the tag event setting, an event may not be detected correctly.
Refer to Section 6.5.3 (3) for the tag event setting.

(5) Access log function (Refer to Section 6.8)

Though several login records may be registered for one login, it is not an error and means that several logins have been executed internally.

(6) Data management function (Refer to Section 6.10)

(a) Backup
Do not alter the backup data. Using the altered backup data can cause the module to fail or malfunction.

(b) Restore
The setting information file of the product with first 5 digits of serial No. 05111 or earlier can be restored to the product with first 5 digits of serial No. 05112 or later.
However, the setting information file of the product with first 5 digits of serial No. 05112 or later cannot be restored to the product with first 5 digits of serial No. 05111 or earlier.

(7) CSV export/import function (Refer to Section 6.10.3)

(a) When editing the setting information file, be sure to use the CSV-exported setting information file. The user should not create a new setting information file.

(b) CSV-import the setting information file in the procedure given in Section 6.10.3 (3).

(c) While CSV export/import is being executed in the data management, do not switch power from on to off, reset the CPU module, or perform management menu operation.
To do so can cause the setting information file to be corrupted or cleared.

(d) As the setting information file includes the password and other important information and its information may be obtained illegally, delete the file from the standard ROM or Compact Flash card after the setting is completed.

Precautions for access to Web server module

(1) Monitor screen and user screen

(a) Since the monitor screens and user screen use the Java applet, JavaVM is required for the Web browser to execute the applet.
Refer to Section 3.1 Remarks (2) and (3).

(b) Displaying each monitor screen and user screen may take a little while. When displaying a monitor or user screen on the Web browser, do not switch the screen to another or update the setting until it is displayed completely.

(c) If communication is interrupted due to some reason while monitoring the system from a monitor or user screen, or if monitoring is executed before connecting the Web server module to the network, the monitor or user screen may not be correctly displayed on the Web browser even after restoration or restart of communications.

(c) If communication is interrupted while monitoring the system from the monitor screen, the monitor screen may not be displayed normally even after communication is restored.

(d) When using the Web server module in a local area, make setting in Local Area Network (LAN) Settings of the Web browser so that the proxy server is not used for the local address.
Refer to Section 4.5 (3).

(e) Values and states displayed on monitor and user screens may have been delayed.
Also, when more than one Web browser has been activated, the display timing varies among them.

(f) Select any other than "Never" for "Check for newer versions of stored pages" in the temporary Internet files settings of the Web browser.
If "Never" is set, the old screen (the one saved in the temporary Internet files) is displayed unchanged when the file is read from the Edit screen, etc.
Refer to Section 4.5 (3).

(g) The old screen (the one saved in the temporary Internet files) may be displayed unchanged if read is performed on the monitor screen and user screen, etc. In that case, delete the temporary Internet files (cache) of the Web browser and read it again.
Refer to Section 4.5 (3).

(h) In the security level setting of the Web browser, set the security level of the Internet and Intranet zones to "Default Level".
Refer to Section 4.5 (3).

(i) In the advanced settings of the Web browser, set to "Restore Defaults".
Refer to Section 4.5 (3).

(j) When displaying the TOP page of the standard screen using an operating system and a Web browser of English version, do not click on the "Japanese" button provided for link to the Japanese version.
Doing so may display an incorrect screen.

(k) When displaying the standard screen of English version using an operating system and a Web browser of Japanese version, words and phrases used by the operating system (e.g. the "Cancel" button to a confirmation message) are displayed in Japanese.

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(2) Display of administrative menu screen

(a) On individual administrative menu screens, make sure to click on the "Save" button after changing the settings.
Switching to another screen or ending the Web browser before clicking on the "Save" button deletes the new settings.

(b) Before complete screen is displayed, do not operate the buttons, etc.

(3) Device test and tag component test

(a) The device test or tag component test may affect the control of the PLC CPU. Ensure safety before execution.

(b) An error may be produced between the value set in the tag component setting and the actually written component value. (Refer to Section 6.2.2 (2).)

(c) In the tag component test, a rounding error may be produced when a real number is written to the target component. (Refer to Section 6.2.2 (2).)

(4) FTP server function (Refer to Section 6.7.1)

(a) It is required to end the FTP operation once and restart connection to FTP from the beginning if a wrong user name or password is entered to FTP, due to the restrictions on the FTP client side application.
Even when the correct user name or password is entered to "user" of the FTP command, FTP may not operate normally.

(b) The maximum number of simultaneous connections to the FTP server is 10. However, since several internal connections may be made simultaneously depending on the FTP client, login may not be allowed even if the number of connections does not seem to reach 10.

(c) If many files are transferred at once by FTP, a 426 (Data connection error) error may occur.
In that case, transfer the files again in numbers.

(d) When a file of the Web server module is overwritten via FTP, the file will be deleted if an error occurs during write of the file.
Write the file again via FTP.

(e) In the case of FTP access by the Internet Explorer, the user authentication screen may not be displayed depending on the Internet Explorer's specifications.
In this case, enter the Web server module address as follows:

ftp://<User name>:<Password>@<Web server module address or host name>/

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Precautions for battery

In any of the following cases, erasure of data (e.g. logging data) being proccessed, corruption of data in the standard ROM drive/Compact Flash™ card during access, or a file system fault may occur. (*)

1) When the battery is not replaced after battery error occurrence (Refer to Section 4.10.3)
2) When shut-down operation is not performed before power off during operation without battery (Refer to Section 4.11)
3) When the battery is removed without shut-down operation being performed (Refer to Section 4.12)

* It is recommended to back up the standard ROM data (setting information, logging data, user HTML, etc.) to the Compact Flash™ card periodically in case of corruption of data in the standard ROM drive. (Refer to Section 6.10)

Precautions for use of Compact Flash™ card

(1) Removal or replacement of Compact Flash™ card
   (a) Be sure to stop file access before removing or replacing the Compact Flash™ card. (Refer to Section 4.9.2.)
   (b) Failure to observe the procedures indicated in Section 4.9.2 may result in erasure of logging data during processing, corruption of data in the Compact Flash™ card during access, or a file system fault.
   (c) If a Compact Flash™ card fault has occurred, refer to Section 9.1 (9) and restore the card.

(2) Diagnostic time of Compact Flash™ card
   (a) The Web server module executes diagnosis (including file restoration) of the Compact Flash™ card when:
      1) Power is turned OFF and ON, or the CPU module is reset.
      2) The Compact Flash™ card is inserted while the power is ON.
   (b) The diagnostic time of the Compact Flash™ card is lengthened if many files are stored in the card.
   It takes approx. 5 seconds for 100 files, and approx. 10 seconds for 1000 files.
   (c) Since the following times may be lengthened due to too many files, delete unnecessary files.
      1) Rising time of the Compact Flash™ card setting status. (X1)
      2) Web server module's ready time. (Rising time of the Module READY (X0))

(3) Compact Flash™ card formatting
   (a) Use the formatting function of the Web server module to format the Compact Flash™ card. (Refer to Section 6.10.2.)
   (b) Do not format the Compact Flash™ card on Windows® XP/2000.
   If it is formatted on Windows® XP/2000 by mistake, recover it according to the manual of the Compact Flash™ card.

(4) Precaution for Compact Flash™ card lifetime (limited number of writes)
The Compact Flash™ card has its own lifetime (the limited number of writes). For details, check the specifications of each product.
Since the lifetime of the Compact Flash™ card generally varies depending on its free space, it is advisable to use the card with sufficient free space.
For the size of the data written to the Compact Flash™ card, refer to Appendix 7.2.

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INTRODUCTION

Thank you for purchasing the Mitsubishi MELSEC-Q series general-purpose PLC.
Before using the equipment, please read this manual carefully to fully understand the functions and performance of the Q series PLC so as to ensure correct use.

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When incorporating the Mitsubishi PLC into other machinery or equipment and keeping compliance with the EMC and low voltage directives, refer to Chapter 3, "EMC Directives and Low Voltage Directives" of the User's Manual (Hardware) included with the CPU module or base unit used.
The CE logo is printed on the rating plate of the PLC, indicating compliance with the EMC and low voltage directives.
For information on compliance with the EMC and low voltage directives, please refer to Section 3.1.3. "Cable" in Chapter 3 "EMC Directive and Low Voltage Directive" in the User’s Manual (Hardware) of the CPU module used or the PLC CPU supplied with the base unit.

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How to Use This Manual

For the Web server module (QJ71WS96), the explanation sections are indicated by the purpose of use.
Use this manual, when you need to know the following.

(1) Features, functions and components

(a) Features and functions
1) Chapter 1 describes the features of the Web server module.
2) Chapter 3 describes the common functions, specifications, etc. of the Web server module.

(b) Supplied products and network components
1) The "Packing List" before Chapter 1 indicates the products included with shipment of the Web server module.
2) Chapter 2 describes the system configuration of the Web server module. Parts and members other than the supplied products should be obtained by users separately.

(2) Procedures required before startup of the Web server module

(a) Startup procedure
Section 4.2 describes the rough procedure prior to the operation of the Web server module.

(b) Connection to the Internet
1) Section 2.2 describes the devices required for network connection.
2) Section 4.4 describes the network connection method by connection type.
3) Chapter 5 describes the examples of connection to the network.

(c) Processing required before startup of the Web server module
1) Section 4.6 describes the setting from the Web browser to use the Web server module.
2) Section 3.5 list the items of setting made from the Web browser. After confirming the descriptions of the setting items, set the parameters according to the detailed explanation sections.

(d) How to check whether the Web server module is faulty or not
Section 4.8 describes the self-diagnostic function of the Web server module.

(e) How to check the connection with the external device for a fault
Section 6.11 describes how to conduct the PING test, e-mail transmission test, file transfer test, etc.

(3) Functions of the Web server module

Chapter 6 describes the functions of the Web server module.

(4) How to create user-original HTML screens

Chapter 7 describes the Mitsubishi-supplied parts that can be used on user-created HTML screens.

(5) Error check and corrective action

Chapter 9 provides the troubleshooting, how to check the error code, and error code list.

(6) Enhancement of the Web server module functions

Appendix 5 describes the enhancement of the Web server module functions.

Generic Terms and Abbreviations

Unless otherwise specified, this manual uses the following generic terms and abbreviations to explain the QJ71WS96 Web server module.

Generic Term/Abbreviation	Description
ACPU	Generic term for A1NCPU, A0J2HCPU, A1SCPU, A1SCPU-S1, A1SHCPU, A1SJCPU, A1SJHCPU, A2CCPU, A2CJCPU, A2NCPU, A2NCPU-S1, A2SCPU, A2SCPU-S1, A2SHCPU, A2SHCPU-S1, A1FXCPU, A2ACPU, A2ACPU-S1, A2UCPU, A2UCPU-S1, A2USCPU, A2USCPU-S1, A2ASCPU, A2ASCPU-S1, A2ASCPU-S30, A2USHCPU-S1, A3NCPU, A3ACPU, A3UCPU and A4UCPU.
CC-Link	Abbreviation for Control & Communication Link.
Ethernet	Generic term for 100BASE-TX, 10BASE-T, 10BASE5 and 10BASE2 network systems.
Ethernet module	Abbreviation for E71, QE71 or Q series corresponding E71.
E71	Generic term for AJ71E71N3-T, AJ71E71N-B5, AJ71E71N-B2, A1SJ71E71N3-T, A1SJ71E71N-B5 and A1SJ71E71N-B2.
GX Developer	Generic product name for product types SWnD5C-GPPW-E, SWnD5C-GPPW-EA, SWnD5C-GPPW-EV and SWnD5C-GPPW-EVA. (n indicates Version 4 or later) -EA means a volume license product, and -EV an upgraded product.
MELSECNET/H	Abbreviation for Q corresponding MELSECNET/H network system.
MELSECNET/10	Abbreviation for AnU or QnA/Q4AR corresponding MELSECNET/10 network system.
QCPU (A mode)	Generic term for Q02CPU-A, Q02HCPU-A and Q06HCPU-A.
QCPU (Q mode)	Generic term for Q00JCPU, Q00CPU, Q01CPU, Q02CPU, Q02HCPU, Q06HCPU, Q12HCPU, Q25HCPU, Q12PHCPU and Q25PHCPU.
QC24(N)	Generic term for AJ71QC24, AJ71QC24-R2, AJ71QC24-R4, A1SJ71QC24, A1SJ71QC24-R2, AJ71QC24N, AJ71QC24N-R2, AJ71QC24N-R4, A1SJ71QC24N and A1SJ71QC24N-R2.
QE71	Generic term for AJ71QE71N3-T, AJ71QE71N-B5, AJ71QE71N-B2, A1SJ71QE71N3-T, A1SJ71QE71N-B5 and A1SJ71QE71N-B2.
QnACPU	Generic term for Q2ACPU, Q2ACPU-S1, Q2ASCPU, Q2ASCPU-S1, Q2ASHCPU, Q2ASHCPU-S1, Q3ACPU, Q4ACPU and Q4ARCPU.
Q series corresponding C24	Generic term for QJ71C24N, QJ71C24N-R2, QJ71C24N-R4, QJ71C24 and QJ71C24-R2.
Q series corresponding E71	Abbreviation for QJ71E71-100, QJ71E71-B5 or QJ71E71-B2.
UC24	Abbreviation for AJ71UC24, A1SJ71UC24-R2, A1SJ71UC24-R4, A1SJ71UC24-PRF, A1SJ71C24-R2, A1SJ71C24-R4, A1SJ71C24-PRF, A1SCPUC24-R2, A2CCPUC24 and A2CCPUC24-PRF.
Web browser	Term for software used to locate and display Web pages.
Web server module	Abbreviation for QJ71WS96 Web server module.
Computer link module (serial communication module)	Generic term for UC24, QC24(N) and Q series corresponding C24. Described as a serial communication module when specifying QC24(N) or Q series corresponding C24.
Switch setting	Abbreviation for intelligent function module switch setting.
Personal computer	Abbreviation for IBM PC/AT or compatible DOS/V-based personal computer.

Meanings and Definitions of Terms

The following table indicates the meanings and definitions of the terms used in the manual of the Web server module.

Term	Description
ADSL	ADSL is an abbreviation for Asymmetric Digital Subscriber Line. This service enables high-speed data communication using the existing analog telephone line.
CGI	CGI is an abbreviation for Common Gateway Interface. This technology starts the program on the server and displays the execution result of the program on the Web browser.
CHAP	CHAP is an abbreviation for Challenge Handshake Authentication Protocol. This authentic method is used for the PPP connection.
Compact Flash card (CF)	A storage card stipulated in the “CF+ and Compact Flash Specification” published by the Compact Flash Association.
DHCP	DHCP is an abbreviation for Dynamic Host Configuration Protocol. This protocol automatically assigns the IP address, subnet mask, DNS server address, etc. in response to a request from the DHCPU client.
DNS	DNS is an abbreviation for Domain Name System. This system translates IP addresses into domain names easy for the user to remember and manages them.
FTP	FTP is an abbreviation for File Transfer Protocol. This protocol is designed to transfer a file.
HTML	HTML is an abbreviation for Hyper Text Makeup Language. This language is used to describe Web pages.
HTTP	HTTP is an abbreviation for Hyper Text Transfer Protocol. This protocol is designed to send/receive the WWW data (World Wide Web) of the Internet.
ICMP	ICMP is an abbreviation for Internet Control Message Protocol. This protocol is designed to transfer errors that occur on the IP network and various data related to the network.
ISP (Internet service provider)	ISP is an abbreviation for Internet Service Provider. It is a company that provides services for connection to the Internet.
NAT	NAT is an abbreviation for Network Address Translator. This function makes conversion between the private IP address and global IP address.
PAP	PAP is an abbreviation for Password Authentication Protocol. This authentic method is used for the PPP connection.
POP3	POP3 is an abbreviation for Post Office Protocol Ver. 3. This protocol is designed to transfer e-mail received by the mail server to the local computer.
POP before SMTP	This system performs user authentication with the POP server when e-mail is sent.
PPP	PPP is an abbreviation for Point to Point Protocol. This protocol is used for one-to-one computer connection.
SMTP	SMTP is an abbreviation for Simple Mail Transfer Protocol. This protocol is designed to transfer e-mail.
SSI	SSI is an abbreviation for Server Side Include. This technology replaces the part described in SSI format with the server side processing result when the server returns HTML to the client.
Tag	Tag is a data table in which data (components) required to make access to the device data of the PLC CPUs on the network are set as one.
UPnP	UPnP is an abbreviation for Universal Plug and Play. This standard is stipulated to easily connect the personal computer, peripheral device, etc. connected to the Internet.
URL	URL is an abbreviation for Uniform Resource Locator. It represents a place on the Internet.

Packing List

The following table indicates the products that comprise the Web server module.

Model Name	Product Name	Quantity
QJ71WS96	QJ71WS96 Web server module	1

A - 24

1 OVERVIEW

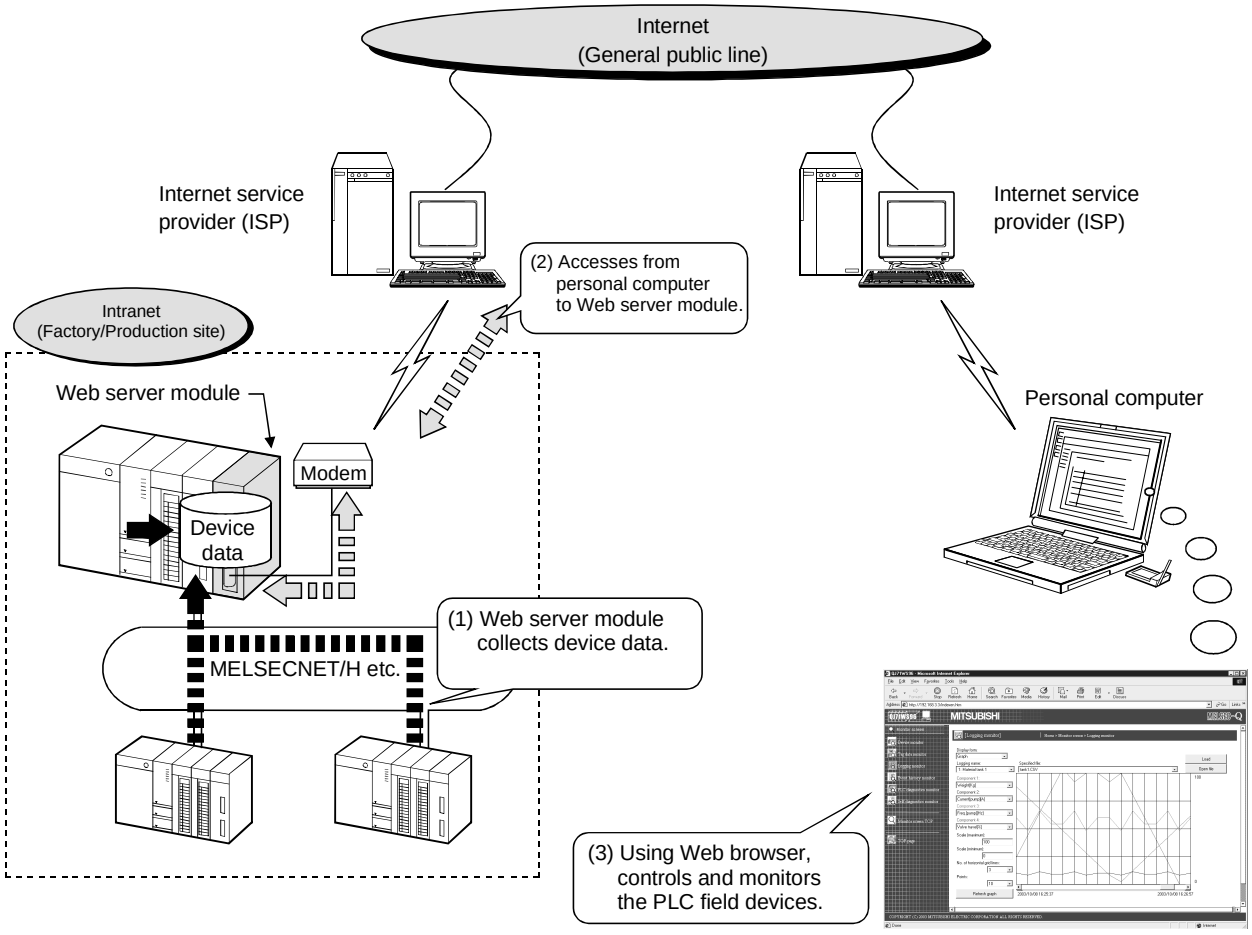
This manual provides the specifications, preparatory procedures, functions, troubleshooting, etc. of the MELSEC-Q Series QJ71WS96 Web server module (hereafter referred to as the Web server module).
When applying the following program examples to the actual system, make sure to examine the applicability and confirm that it will not cause system control problems.

1.1 Features

This section explains the features of the Web server module.

(1) Remote monitoring of PLC CPU via Internet

The Web server function allows users to monitor PLC CPUs at a remote location using a commercially available Web browser on a personal computer connected to the Internet/Intranet.

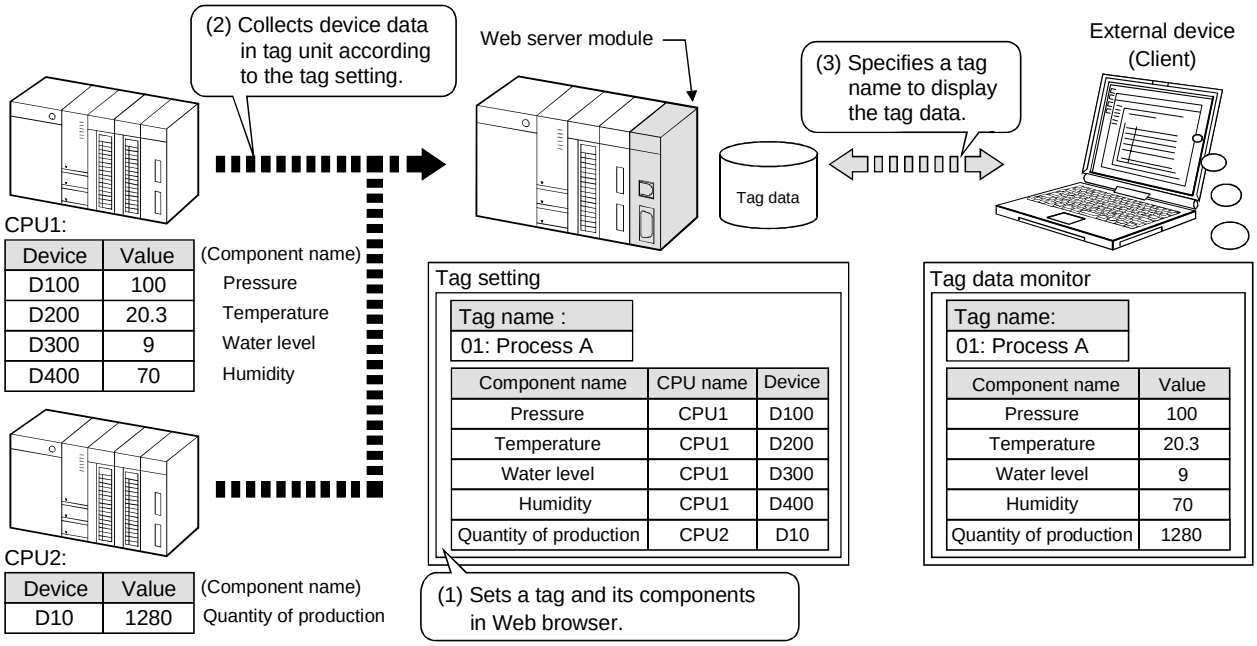


1 - 1

1

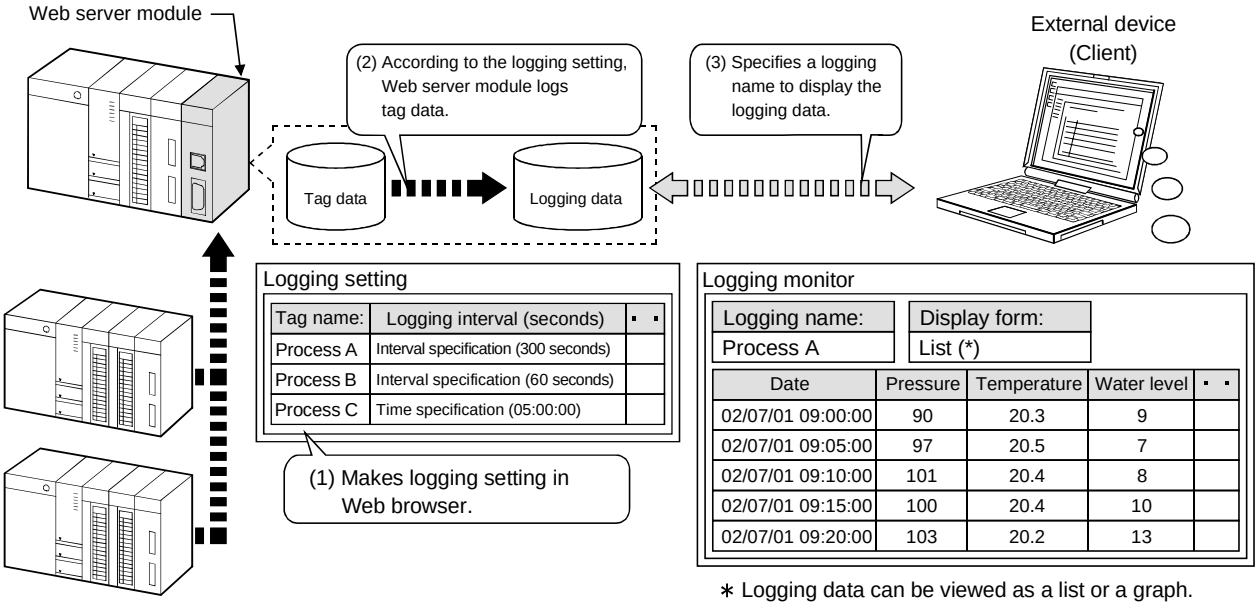
(2) Collection/Display of tag data (Tag function)

A set of individual PLC CPU's device data on a network is entered as a tag and the Web server module collects those device data in tag unit.
The collected data can be displayed in a Web browser by specifying a tag name.



(3) Display of tag data logging/logging result (Logging function)

Tag data can be stored as a CSV file in time series at the user-specified execution timing (by setting timing, start/stop condition).
The stored file can be displayed in a Web browser or downloaded by FTP operation, etc.

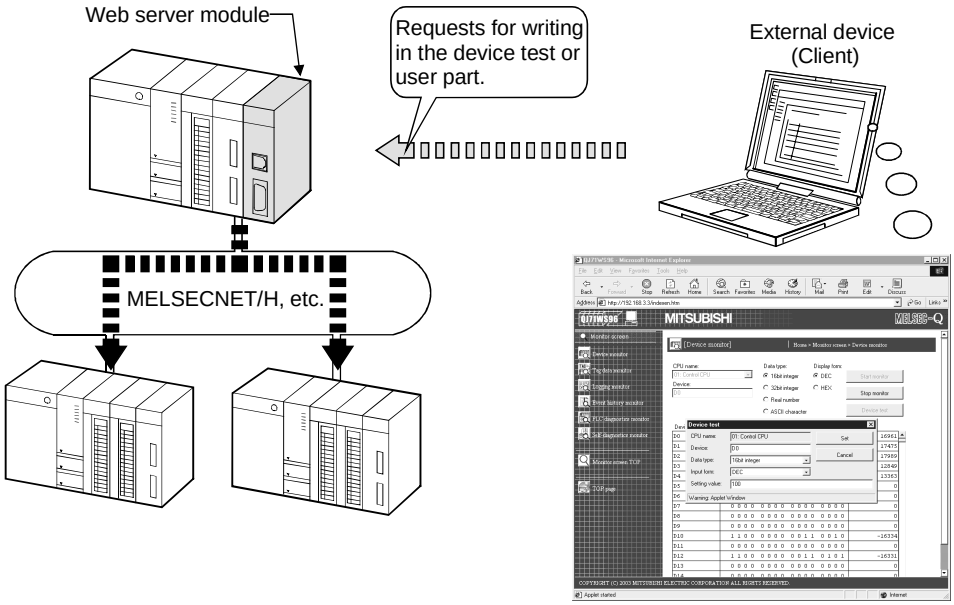

Web server module
(2) According to the logging setting, Web server module logs tag data.
(3) Specifies a logging name to display the logging data.
External device (Client)
Tag data
Logging data
Logging setting
Tag name: | Logging interval (seconds)
Process A | Interval specification (300 seconds)
Process B | Interval specification (60 seconds)
Process C | Time specification (05:00:00)
(1) Makes logging setting in Web browser.
Logging monitor
Logging name: Process A
Display form: List (*)
Date | Pressure | Temperature | Water level
02/07/01 09:00:00 | 90 | 20.3 | 9
02/07/01 09:05:00 | 97 | 20.5 | 7
02/07/01 09:10:00 | 101 | 20.4 | 8
02/07/01 09:15:00 | 100 | 20.4 | 10
02/07/01 09:20:00 | 103 | 20.2 | 13

∗ Logging data can be viewed as a list or a graph.

(4) Data write from Web browser to PLC CPU

Using the standard screen or user screen, device data or tag data can be written from the Web browser to the PLC CPUs.

While data can be written in word unit, ON/OFF data can be used for ON/OFF operation in bit unit.

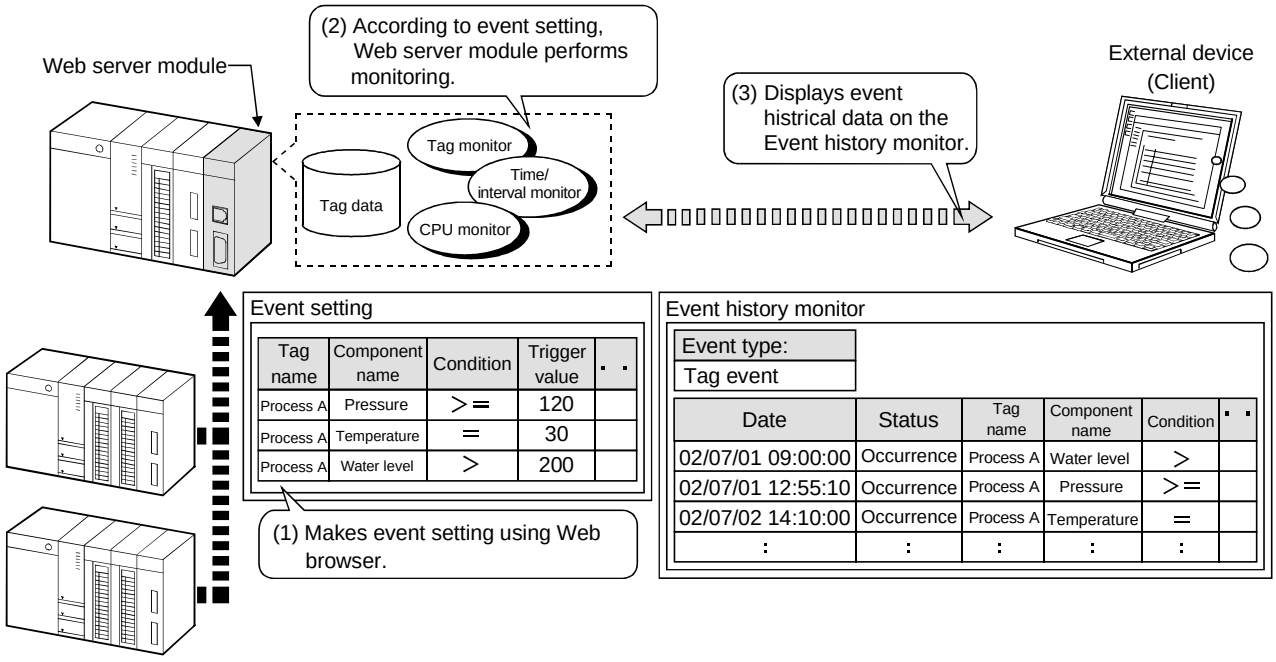


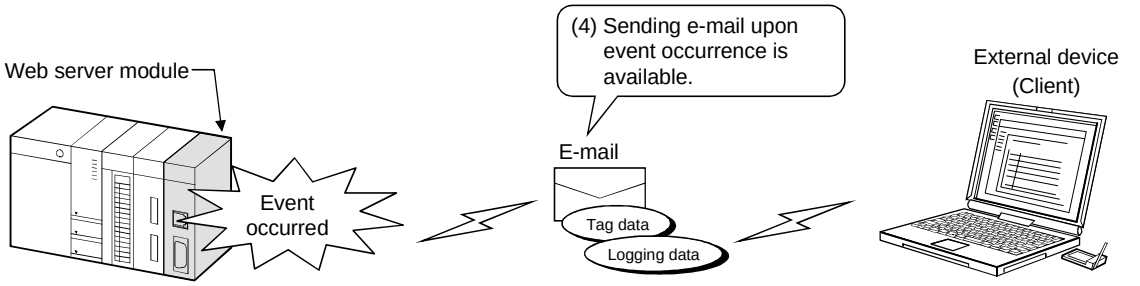
(5) Event monitoring/History display (Event monitor function)

The Web server module can monitor the PLC CPU status (CPU monitor), tag data (tag monitor) and time (time/interval monitor), and store the historical data of occurred events into CSV files.

The stored files can be displayed in a Web browser or downloaded by FTP operation.

The e-mail transmission at event occurrence is also available.

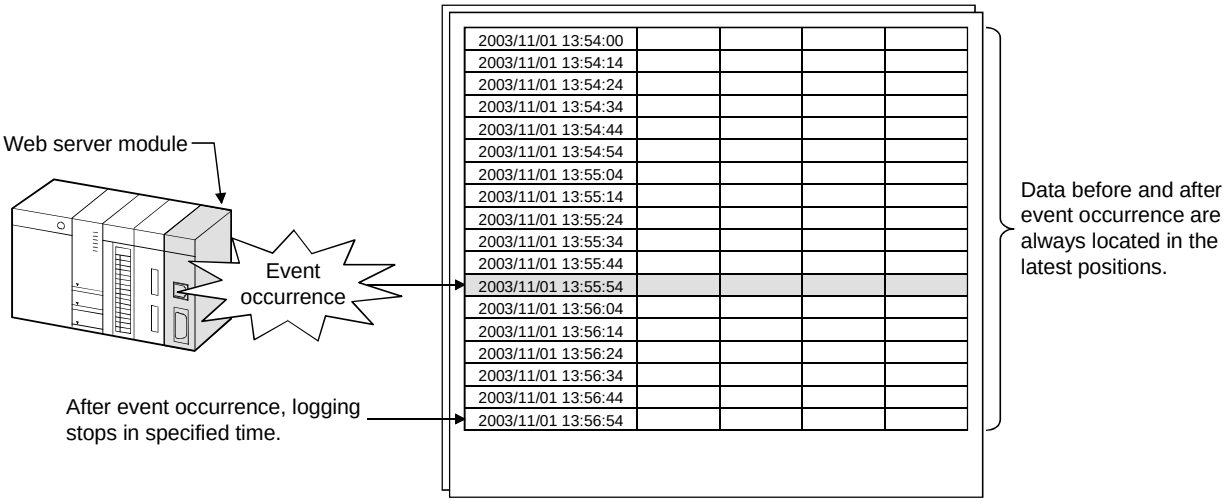




(6) Storage of logging data before and after event occurrence (Logging function)

By setting the occurrence of an event as the start/stop condition of logging, logging data before and after event occurrence can be stored.

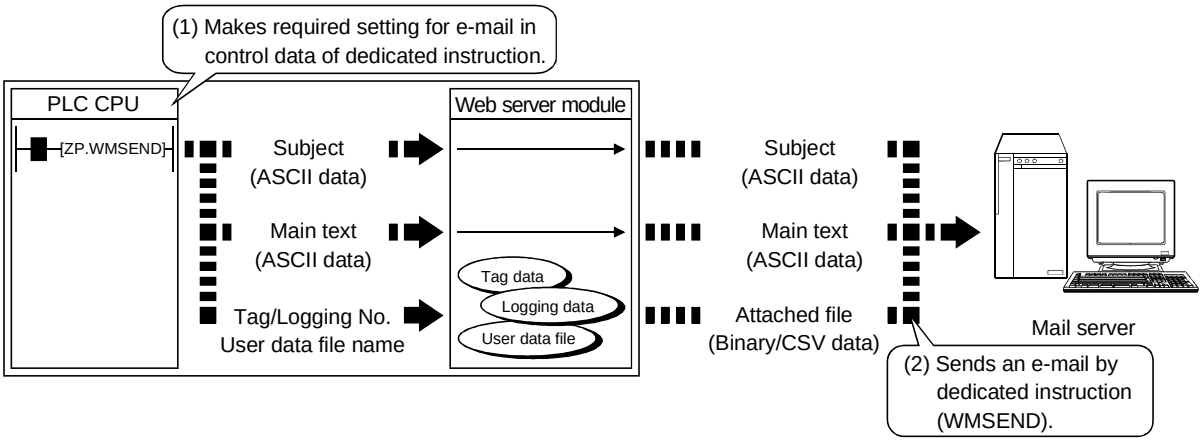
This enables only necessary data to be stored without the logging data before and after event occurrence being buried in the file.



(7) Data transmission/Alarm notification by e-mail (E-mail function)

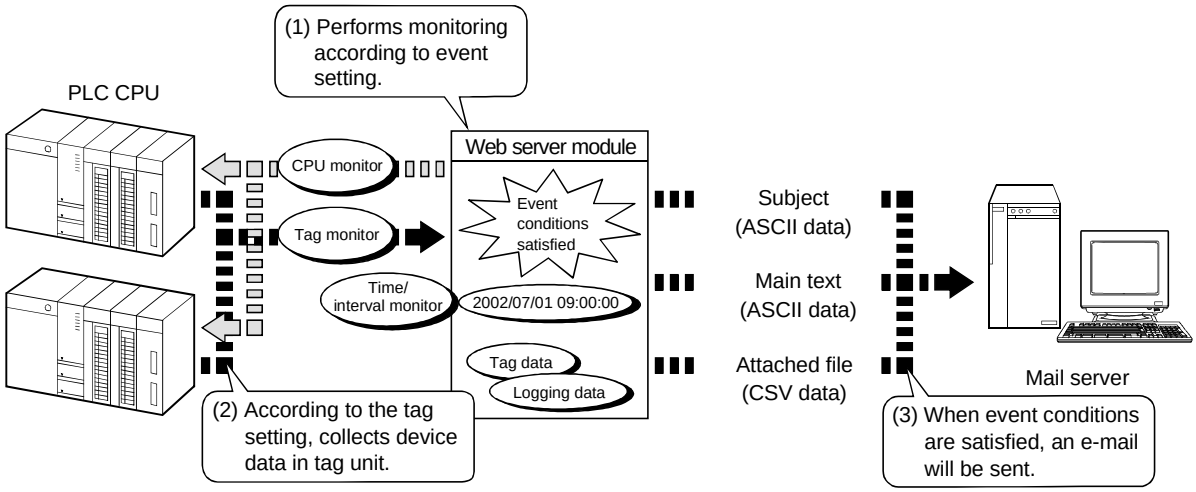
(a) E-mail transmission by PLC CPU

With the dedicated instruction (WMSEND), a tag data/logging data/user data file can be sent as an attached file of e-mail.



(b) E-mail transmission by event monitor function

Event setting enables transmission of an event data, tag data or logging data by e-mail when an event occurs.


(1) Performs monitoring according to event setting.
PLC CPU
Web server module
CPU monitor
Tag monitor
Time/ interval monitor
Event conditions satisfied
2002/07/01 09:00:00
Tag data
Logging data
Subject (ASCII data)
Main text (ASCII data)
Attached file (CSV data)
Mail server
(2) According to the tag setting, collects device data in tag unit.
(3) When event conditions are satisfied, an e-mail will be sent.

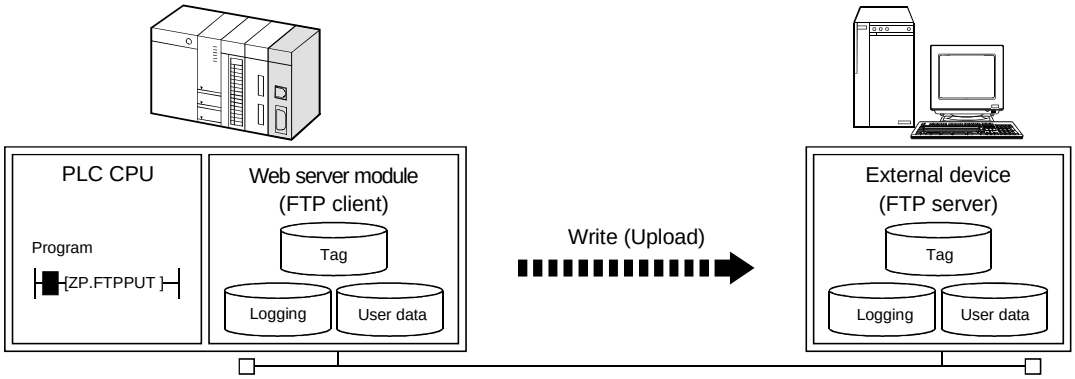
1 - 6

(8) Read/Write of file by FTP (FTP function)

(a) FTP client function

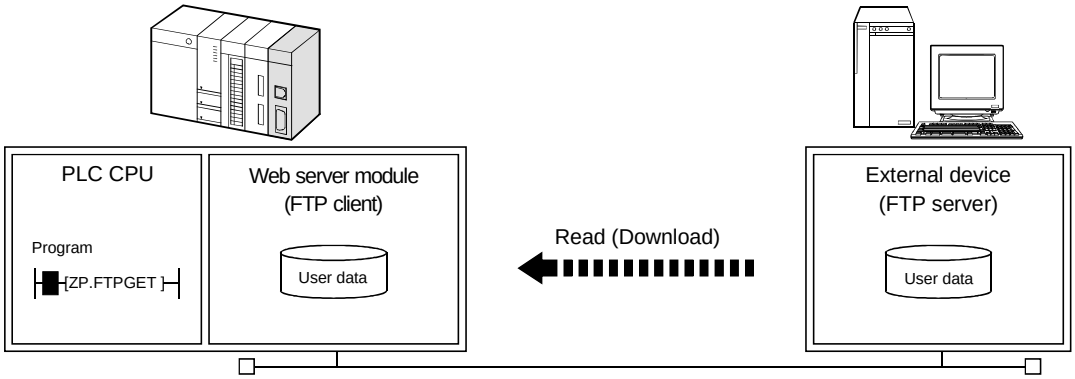
1) FTPPUT instruction

The tag data/logging data/user data file stored in the Web server module can be written to an external device (FTP server).



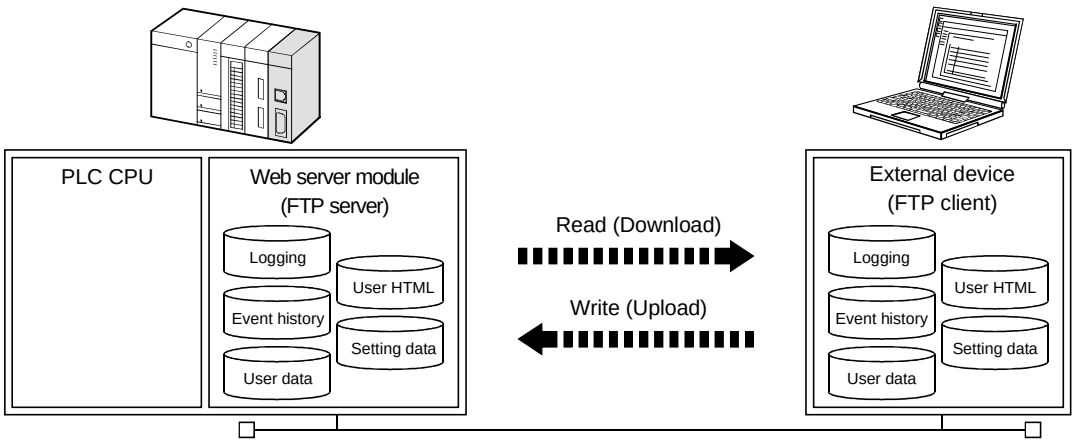
2) FTPGET instruction

The user data file stored in the external device (FTP server) can be read to the Web server module.



(b) FTP server function

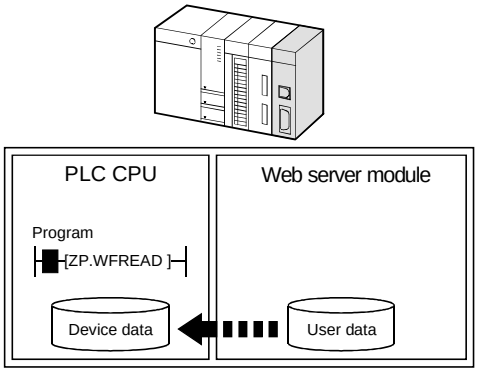
The files stored in the Web server module can be read/written from the external device (FTP server).



(9) Read/write of user data file by PLC CPU (Dedicated instructions)

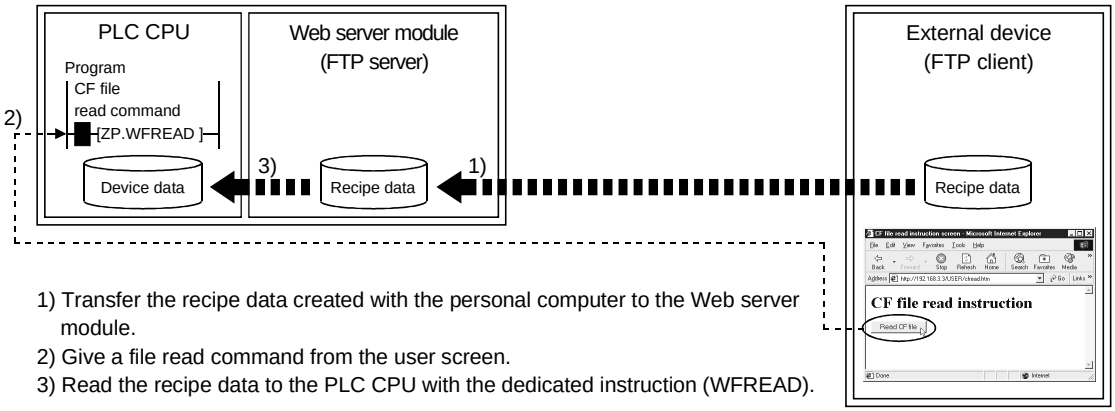
(a) WFREAD instruction

The user data file on the compact flash card mounted on the Web server module can be read to the device data of the PLC CPU.



(Example) User data file reading

Transfer the recipe data created with the personal computer to the Web server module, and read the data from the Web server module to the device data of the PLC CPU with the WFREAD instruction. (*1)

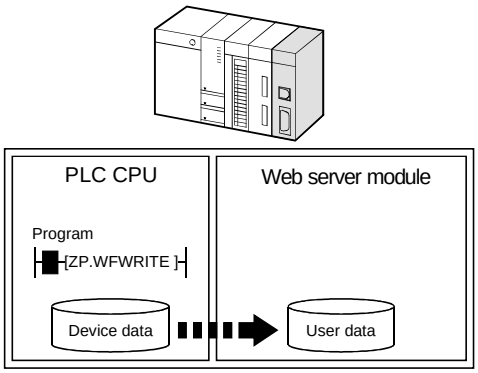


1) Transfer the recipe data created with the personal computer to the Web server module.
2) Give a file read command from the user screen.
3) Read the recipe data to the PLC CPU with the dedicated instruction (WFREAD).

*1 File transfer to the Web server module can also be performed with the dedicated instruction (FTPGET).

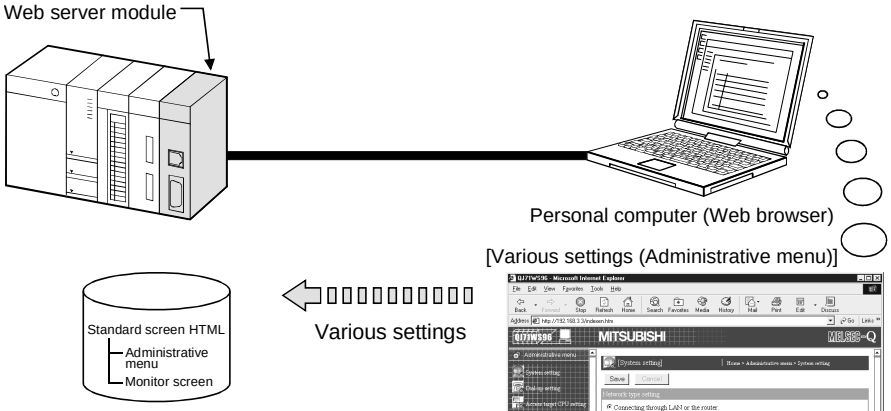
(b) WFWRITE instruction

The device data of the PLC CPU can be written to the user data file of the compact flash card mounted on the Web server module.



(10) Easy Web server (Web server module) system configuration by setting in Web browser

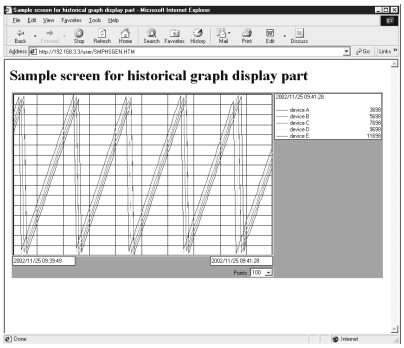
Setting in a Web browser allows easy Web server system configuration.
Once the Web server module is connected to the network, users can monitor device data on the standard screen of the Web server module.



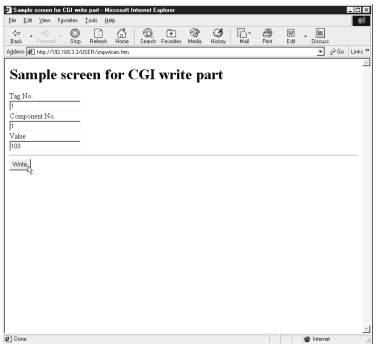
(11) Creation of user screens using parts supplied as standard

Creating HTML files using the standard-supplied user parts (applet, SSI, CGI parts) allows the user to make original Web screens.

[Applet parts]

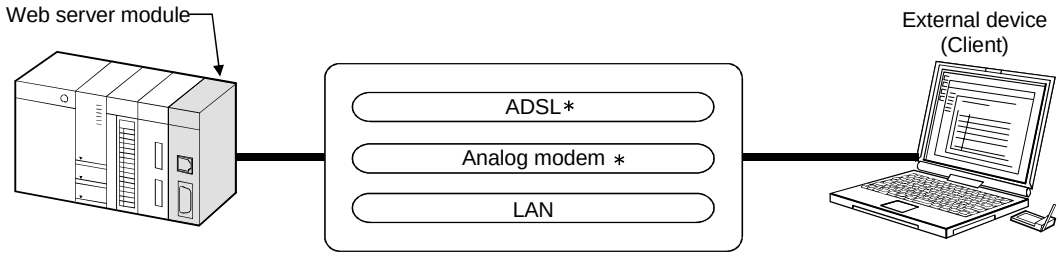


[SSI, CGI parts]



(12) Compatibility with a variety of connection methods

(a) A connection method that meets a user's network environment can be selected.



* For connection to the Internet, sign-up with the Internet service provider is required in advance.

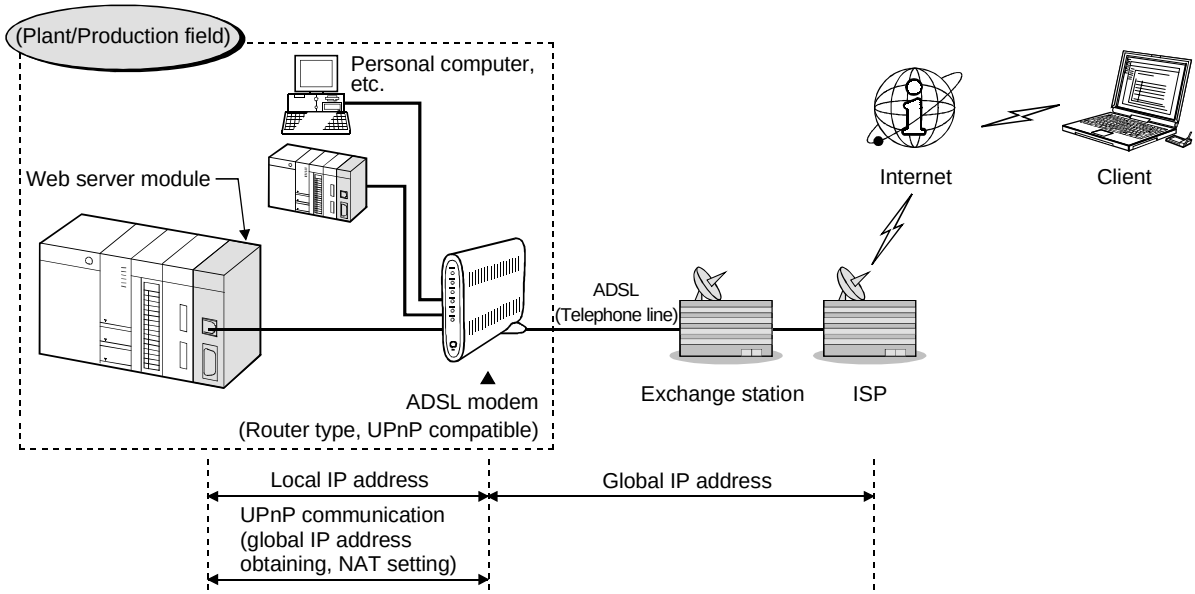
(b) The Web server module can be connected to an ADSL line via a UPnP-compatible broadband router.

1) By merely connecting the Web server module to an ADSL line, it can be connected to the network without taking account of the NAT setting of the router.
2) In the environment where a global IP address is dynamically assigned, the Web server module can obtain the global IP address from the router and notify the client of the address.

(Example) Using ADSL modem (router type, UPnP compatible)

Using the router type ADSL modem, a single ADSL line can be shared with the personal computer, etc.

Using the security functions, e.g. firewall and VPN, of the router prevents illegal entrance from external networks.



(13) Seamless access beyond network hierarchies

Using the Web server module as a gateway, the statuses of the PLC CPUs connected hierarchically with Ethernet, MELSECNET/H and/or CC-Link can be monitored and those data can be collected.

(14) High capacity and backup memory

(a) Processing of large data volume

Large volume of data that is beyond capability of the PLC CPU can be processed using the standard ROM and Compact Flash™ card.
Saving device data in file format and accessing them from a remote location is available using Web browser or FTP.

(b) Backup/Restoration of standard ROM data

The data (setting information, logging data, user HTML, etc.) of the standard ROM can be backed up on the Compact Flash™ card. It is also possible to restore the data of the Compact Flash™ card onto the standard ROM.

(c) Power off without shut-down operation

The file protection battery allows power to be switched on/off any time without troublesome shut-down operation. (When a battery is installed)

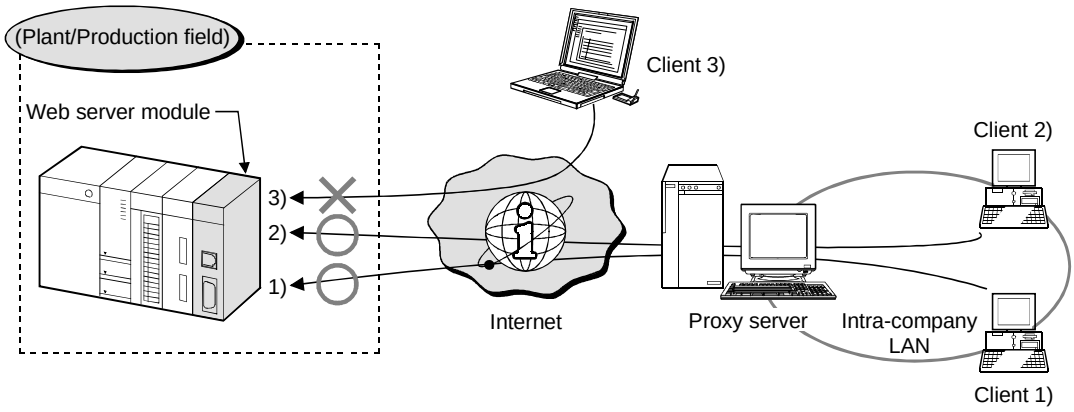
(15) Prevention of illegal access by user authentication and IP filter functions

(a) By basic authentication of the user name and password, the Web server module can restrict access of users and setting operations.
(User authentication function)

(b) The IP address of the access source can be identified to restrict access.
(IP filter function)

(Example) Using IP filter function

When access is made from an intra-company LAN (client 1), 2)), registering the IP address of the proxy server to the IP filter shuts off external access (client 3)), enabling access from only the intra-company LAN.



2 SYSTEM CONFIGURATION

This chapter explains the system configuration of the Web server module.

2.1 Applicable Systems

This section explains the applicable systems.

(1) Applicable modules and number of mountable Web server modules

The following table shows the CPU module compatible with web server module and the number of mountable web server modules.

Applicable module		Number of mountable web server modules	Remarks
CPU module	Q00JCPU	Maximum 8	(*1)
	Q00CPU Q01CPU	Maximum 24	
	Q02CPU Q02HCPU Q06HCPU Q12HCPU Q25HCPU	Maximum 64	
	Q12PHCPU Q25PHCPU		

*1 Refer to the User's Manual (Function Explanation/Programming Basic) of the CPU module.

(2) Mountable position on base unit

The Web server module can be mounted on any I/O slot (*2) of the base unit.

*2 Limited to within the I/O point range of the CPU module.

(3) Application to multiple CPU system

The Web server module is compatible with a multiple CPU system.

When using the Web server module in a multiple CPU system, refer to the User's Manual (Function Explanation/Programming Basic) of the CPU module used first.

(4) Compatible software package

The following table shows the systems where the Web server module will be used and the corresponding software package.

It should be noted that GX Developer is not capable of accessing the PLC CPU via the Web server module.

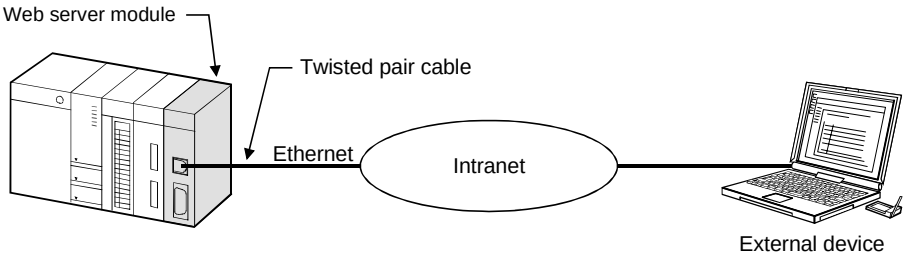
		Software version
		GX Developer
Q00J/Q00/Q01CPU	Single CPU system	Version 7 or later
	Multiple CPU system	Version 8 or later
Q02/Q02H/Q06H/Q12H/ Q25HCPU	Single CPU system	Version 4 or later
	Multiple CPU system	Version 6 or later
Q12PH/Q25PHCPU	Single CPU system	Version 7.10L or later
	Multiple CPU system	

2.2 Network Connections

This section explains the connection methods of the Web server module to the network.

(1) LAN connection

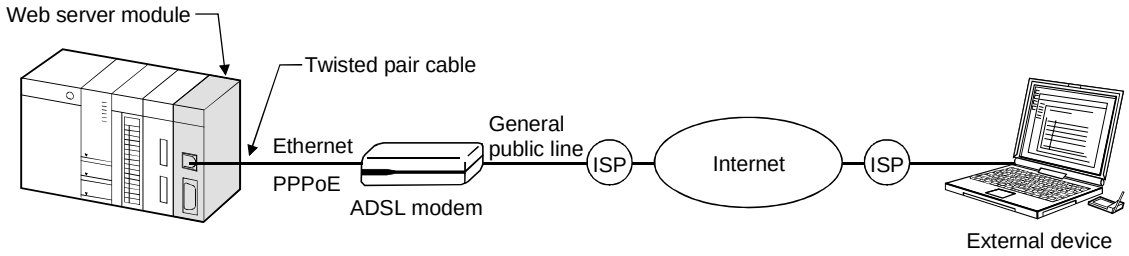
The Web server module can be connected to a LAN using the 10BASE-T/100BASE-TX interface.



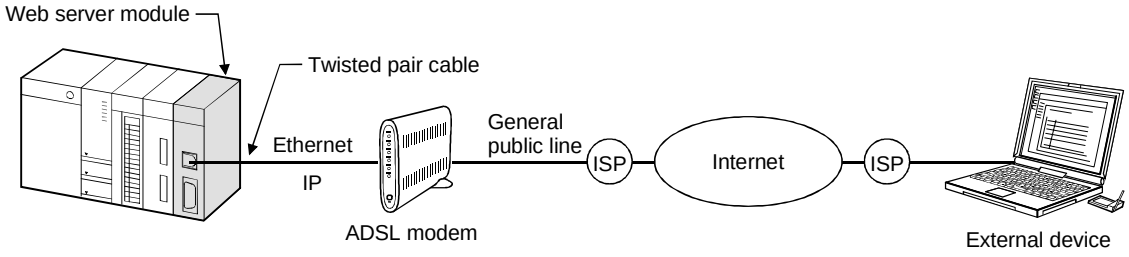
(2) Connection via ADSL modem

The Web server module can be connected to the Internet through ADSL modem using 10BASE-T/100BASE-TX interface.

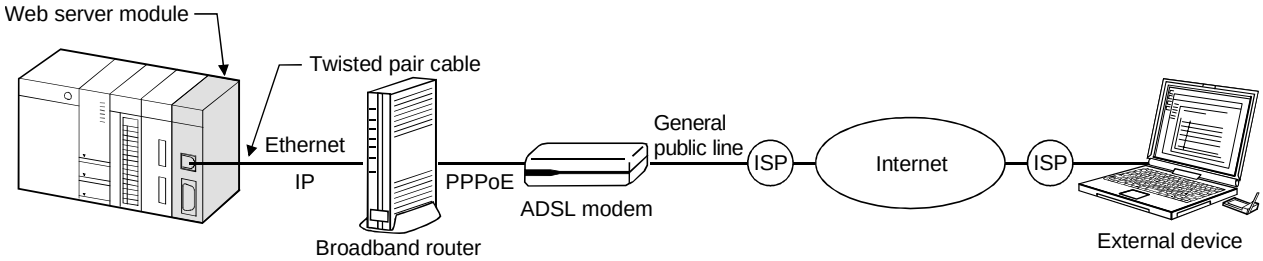
(a) When using bridge type ADSL modem



(b) When using router type ADSL modem (∗1) (∗2)



(c) When using bridge type ADSL modem + broadband router (∗1) (∗2)



*1 It is recommended to use a UPnP-compatible product.
When the product is incompatible with UPnP, contract on a static IP address with an Internet service provider and the NAT setting on the router are required.

*2 Independently of whether the product is compatible or incompatible with UPnP, the initial setting of the modem or router must be made before start-up.

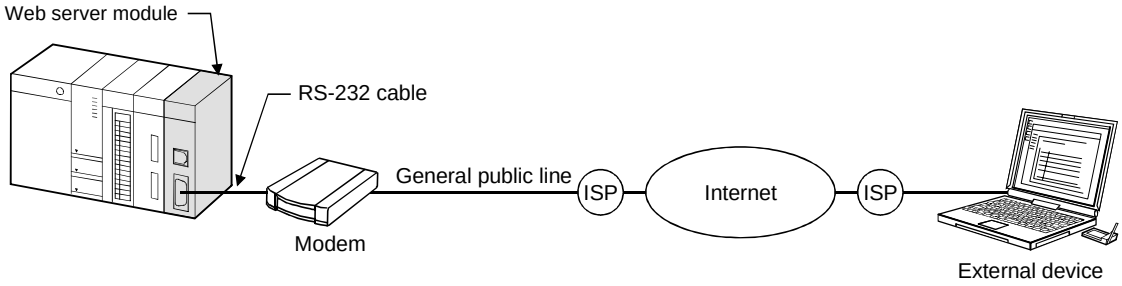
POINT

(1) Internet connection via ADSL modem is made in dial-up setting. (Refer to Section 4.6.4.)

(2) A global IP address is assigned to the Web server module by the Internet service provider.
With the address notification function, the external device can be informed of the IP address that the Web server module has acquired. (Refer to Section 6.9.)

(3) Connection via analog modem

The Web server module can be connected to the Internet through analog modem using the RS-232 interface.



POINT

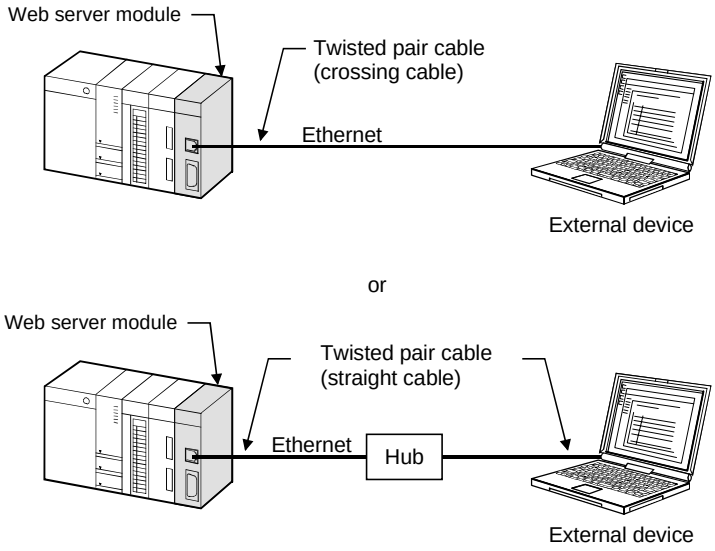
(1) Internet connection via analog modem is made in dial-up setting. (Refer to Section 4.6.4.)

(2) A global IP address is assigned to the Web server module by the Internet service provider.
With the address notification function, the external device can be informed of the IP address that the Web server module has acquired. (Refer to Section 6.9.)

2.3 System Configuration for Initial Setting, Maintenance and Inspection

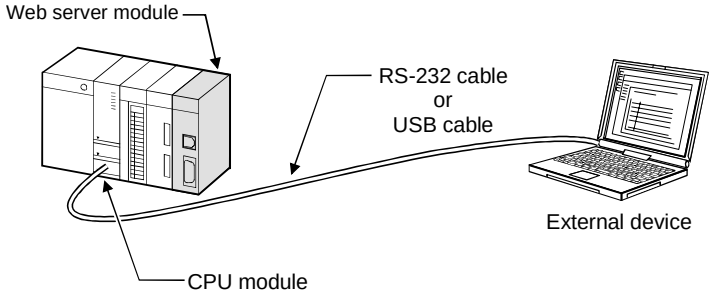
This section shows a system configuration in the case of initial setting (system setting, dial-up setting), maintenance and inspection of the Web server module.

(1) System configuration for initial setting, maintenance and inspection by Web browser



POINT
(1) Set the same network address to the Web server module and external device. (2) When changing the Web server module's IP address after initial setting, change the system setting to the default by the switch setting of GX Developer and make initial setting again. (Refer to Section 4.7 for the switch setting of GX Developer.)

(2) System configuration for switch setting, sequence program creation and PLC diagnostics by GX Developer



2.4 Connection Device

This section explains the devices compatible with the Web server module.

(1) Compact Flash™ card

The Compact Flash™ card applicable to the Web server module is a TYPE I storage card that meets the Compact Flash™ specifications.
One Compact Flash™ card can be set to the Web server module.

POINT
The Compact Flash™ card has its own lifetime (the limited number of writes). For details, check the specifications of each product.

(2) Analog modem

The following table provides the specifications of the analog modem applicable to the Web server module.

Item	Specifications
Web server module side interface	Operable with the interface specifications of the CH2 (RS-232) side on the Web server module (refer to Section 3.1)
Data communication control command	Compatible with AT command of Hayes
DR Signal Control	Can turn on only the DR (DSR) signal independently

(3) ADSL modem

The following table provides the specifications of the ADSL modem applicable to the Web server module.

Item	Specifications
Web server module side interface	Operable with the interface specifications of the CH1 (10BASE-T/100BASE-TX) side of the Web server module (refer to Section 3.1).
Protocol	PPPoE (PPP over Ethernet) or PPPoA (PPP over ATM)
Connection form	Bridge type or router type (∗1)

∗1 Use the router type ADSL modem that satisfies the following.

- The modem has the NAT (address conversion) function.
- The modem is compatible with Universal Plug and Play (UPnP).
- When the modem is incompatible with UPnP, it is necessary for the user to make a contract on a static IP address with an Internet service provider and make the NAT setting of the router.

(4) Broadband router

The following table provides the specifications of the broadband router applicable to the Web server module.

Item	Specifications
Web server module side interface	Operable with the interface specifications of the CH1 (10BASE-T/100BASE-TX) side of the Web server module (refer to Section 3.1).
NAT	Should have the NAT (address conversion) function.
UPnP	Should be compatible with Universal Plug and Play (UPnP). (*2)

*2 When the broadband router is incompatible with UPnP, it is necessary for the user to make a contract on a static IP address with an Internet service provider and make the NAT setting of the router.

(5) Twisted pair cable

Use the twisted pair cable that meets IEEE802.3 10BASE-T/100BASE-TX standards.

(a) For 100Mbps

Use either of the following cables.

1) Unshielded twisted pair cable (UTP cable), Category 5
2) Shielded twisted pair cable (STP cable), Category 5

(b) For 10Mbps

Use either of the following cables.

1) Unshielded twisted pair cable (UTP cable), Category 3 (4, 5)
2) Shielded twisted pair cable (STP cable), Category 3 (4, 5)

POINT

During the high speed communication (100Mbps) via 100BASE-TX connection, a communication error may occur due to the effect of high frequency noise generated from the device other than PLC, depending on the installation environment.
Take the following countermeasures on the Web server module side to eliminate the effect of high frequency noise.

(1) Wiring
- Do not bundle the twisted pair cables with the main circuit or power cables or bring them close to each other.
- Make sure to place the twisted pair cable in a duct.

(2) Cable
- In the environment where the cable is susceptible to noise, use the shielded twisted pair cable (STP cable).

(3) 10Mbps communication
- Connect the 10Mbps-compatible device with Web server module, and then transmit the data to the device at transmission speed of 10Mbps.

(6) RS-232 cable

Use the RS-232-compliant cable of up to 15m.

[Recommended cable]
7/0. 127 □P HRV-SV... Specify the number of pairs in □.
(for 13 pairs, specify 7/0. 127 13P HRV-SV.)
(Oki Electric Cable Company, Limited)

(7) Internet service provider

The following table provides the specifications of the Internet service provider to be connected to the Web server module.

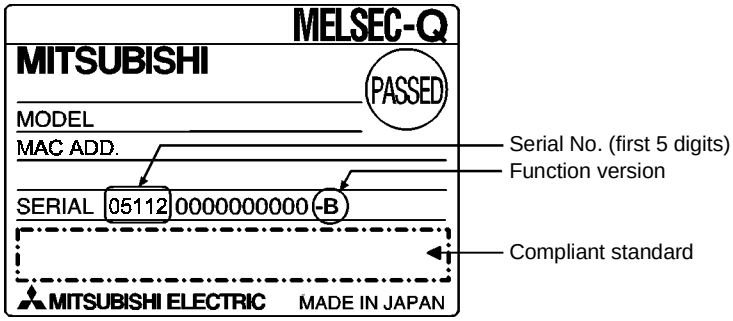
Item	Specifications
Protocol	PPP (Point to Point Protocol)
Authentic method	PAP or CHAP (Operable without authentication)
IP address	Global IP address must be assigned. (*3)
E-mail (When being set)	SMTP server must be prepared.

*3 When using a UPnP-incompatible router type ADSL modem or broadband router, it is necessary for the user to make a contract on a static IP address with an Internet service provider and make the NAT setting of the router.

2.5 Checking Function Version

This section explains how to check the function version of the Web server module.

(1) Checking at "SERIAL" section in the rating plate on the Web server module



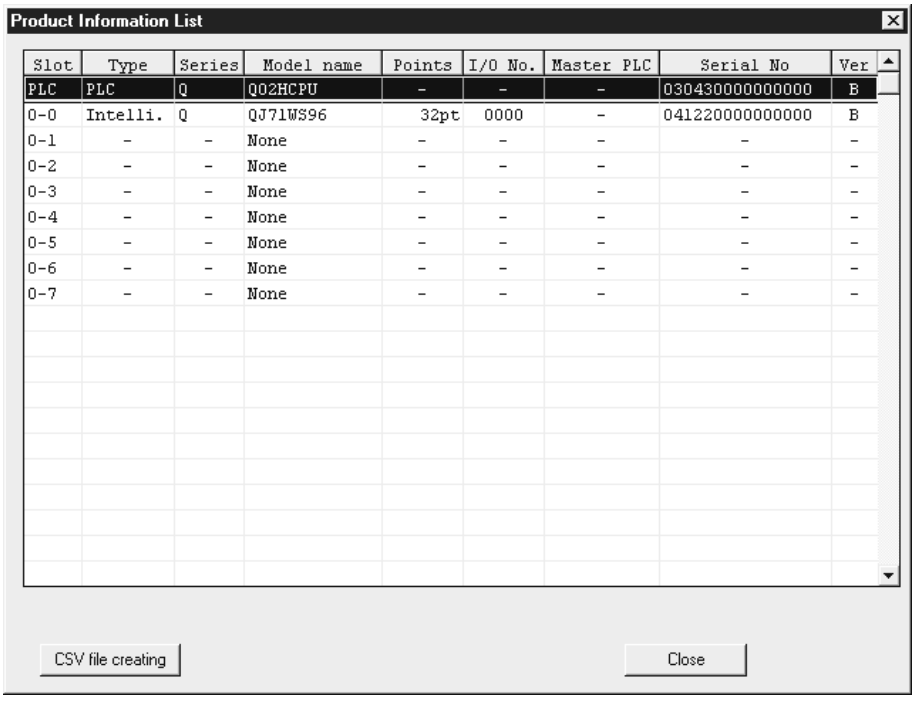
(2) Checking with GX Developer

The function version of the Web server module is shown on the "Product Information List" or "Module's Detailed Information" screen of GX Developer. The following explains how to check the function version on the "Product Information List" screen. (Refer to Section 9.2.2 for the "Module's Detailed Information" screen.)

- The function version of the Web server module is displayed in the Ver.column.

[Startup procedure]

[Diagnostics] → [System monitor] → "Product Inf. List"


Product Information List
Slot | Type | Series | Model name | Points | I/O No. | Master PLC | Serial No | Ver
PLC | PLC | Q | Q02HCPU | - | - | - | 030430000000000 | B
0-0 | Intelli. | Q | QJ71WS96 | 32pt | 0000 | - | 041220000000000 | B
0-1 | - | - | None | - | - | - | - | -
0-2 | - | - | None | - | - | - | - | -
0-3 | - | - | None | - | - | - | - | -
0-4 | - | - | None | - | - | - | - | -
0-5 | - | - | None | - | - | - | - | -
0-6 | - | - | None | - | - | - | - | -
0-7 | - | - | None | - | - | - | - | -
CSV file creating
Close

3 SPECIFICATIONS

This chapter provides information on the performance specifications, transmission specifications, etc. of the Web server module.
For the general specifications of the Web server module, refer to the user's manual of the CPU module.

3.1 Performance Specifications

This section shows the performance specifications of the Web server module.

(1) Transmission and Interface specifications

Item			Specifications	
10BASE-T/100BASE-TX			—	
	Interface (*1)		10BASE-T	100BASE-TX
	Data transmission speed		10Mbps	100Mbps
	Transmission method		Base band	
	Number of cascaded stages		Cascade connection Maximum 4 stages	Cascade connection Maximum 2 stages
	Maximum segment length (*2)		100m	
	Supported function		Auto negotiation function (automatically recognizes 10BASE-T/10BASE-TX)	
RS-232			—	
	Interface		Compliance with RS-232 (D-sub 9 pin)	
	Communication method		Full-duplex communication	
	Synchronization method		Start-stop synchronization method	
	Transmission speed		9600, 19200, 38400, 57600, 115200 bps	
	Transmission distance		Maximum 15m	
	Data format	Start bit	1	
		Data bit	8	
		Stop bit	1	
	Parity check		None	
	Transmission control		Flow control (RS/CS control) is available	
	Recommended cable		7/0. 127 □P HRV-SV outside diameter: 8.5mm or longer (Oki Electric Cable Company, Limited Specify the number of pairs in □.)	
	External wiring applicable connector		9 pin D-sub (Male) fixing type	
Compact Flash™ card			—	
	Supply power voltage		3.3V±5%	
	Size		TYPE I card	
	Number of mountable cards		1	
Number of occupied I/O points			32 points/1 slot (I/O assignment: intelligent 32 points)	
Maximum number of writes for Standard ROM (Flash ROM)			Maximum 100,000 times to one area (refer to Remarks (1))	
Clock			Obtained from CPU No. 1 (every 60s) (Refer to Section 3.9)	
5V DC internal current consumption			0.65A	
External dimensions			98 (3.86 in.) (H) × 27.4 (1.08 in.) (W) × 90 (3.54 in.) (D) [mm]	
Weight			0.17kg (0.37lb.)	

*1 Web server module recognizes 10BASE-T/10BASE-TX according to the external device. For connection with the hub that does not have the auto negotiation function, set the hub side to the half-duplex communication mode.
*2 Distance between the hub and node.

(2) Software specifications

Item		Specifications
Web server	Number of simultaneously connectable nodes	5
	HTTP version	1.0
	User area capacity	Standard ROM: Maximum 5MB When Compact Flash™ card is used: Maximum 1GB (Including the home page capacity and logging capacity)
	Parts for creating user screen	Java applet: 15 types, SSI: 1 type, CGI: 3 types (The file included as standard can be used (cannot be created by the user))
Browser	Valid browser	Internet Explorer 5.5/6.0 of Microsoft® Corporation (Refer to (4) in Remarks)
	Java VM	Microsoft® VM Build number: 3309 or later (*1) (Refer to (2) in Remarks) Sun Microsystems JRE (J2SE) v1.4.1_02 or later (Refer to (3) in Remarks)
E-mail	Subject	Maximum 373 words
	Main text	Maximum 960 words
	Attached file	Maximum 256k words (512k bytes)
	Attached file format	MIME Format
	MIME version	1.0
	Attached file Data	CSV or binary format
	Division	Attached file cannot be divided
	Encryption	None
	Compression	None
	Communication with mail server	SMTP (send server) port number = 25
	Operation check mailer	Internet Explorer 5.5/6.0 of Microsoft® Corporation (Outlook® Express 5.5/6.0)
	Others	POP before SMTP compatible
FTP server	Server function	Provided
	Number of simultaneously connectable nodes	10
FTP client	Client function	Provided (PUT, GET)
Security	User authentication	Account number: Maximum 16 (User ID: 1 to 20 characters, password: 8 to 14 characters)
	Access log	Maximum 500
	IP filter	Registration number: Maximum 32
Data collection	Tag	No. of tags: Maximum 64, No. of components: Maximum 4096 (maximum 64 components for each tag)
	Logging	No. of logging: Maximum 64, No. of lines (number of records): Maximum 10000 lines
	Sampling interval	• When "Sampling: Execute at high speed" is selected in tag setting (control CPU only): 100 to 60000ms (total number of device points: Maximum 96) • When "Sampling: Execute" is selected in tag setting: 1 to 32767ms (number of components: Maximum 4096)

*1 There are some restrictions on the use of audio parts in Microsoft® VM. (Refer to Section 7.2.6 (4).)

Remarks

(1) Number of writes for Standard ROM (Flash ROM)
Data can be written to the same area of a standard ROM up to 100,000 times and the life of a standard ROM drive is limited as shown below.
(a) Standard ROM drive life
Life of standard ROM drive (days) = 737000/write size per day * (MB)

3 - 2

(Example) When executing 4 logging settings in which 64 "single word"-data-type components are to be collected at intervals of 10 seconds
LS=20+(18+1)×64+1=1237 bytes
Write size per day = 1237×(86400/10)×4 = 40.7MB
Life of standard ROM drive life = 737000/40.7MB = 18542 days = 50.8 years
LS: Write size to logging file at one time

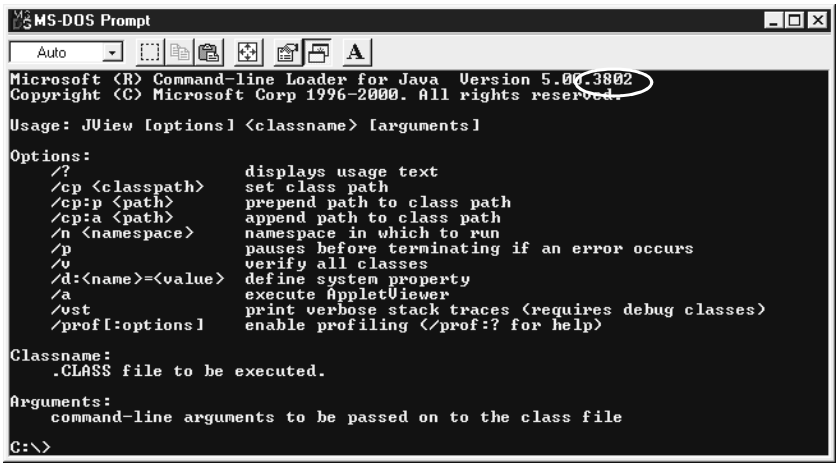
∗ For calculation of the size of the data written to the standard ROM drive per day, refer to Appendix 7.1.

(b) Checking standard ROM drive usage
Used condition of a standard ROM drive can be checked by the number of standard ROM erasure in the buffer memory area (buffer memory: 10 to 11).
When a standard ROM is erased frequently, take appropriate measures such as stopping logging or changing the storage location of the logging file to Compact Flash™ card.

(2) Checking the Build number of Microsoft® VM and downloading Microsoft® VM
(a) Checking the Build number of Microsoft® VM
By entering "jview" on the MS-DOS Prompt (command prompt) screen, the Build number of Microsoft® VM can be checked as shown below. (∗)

∗ When not displayed as below, Microsoft® VM has not been installed and must be installed. (Refer to (b).)

[Execution example]
The following is an example in which the above operation is executed on the MS-DOS prompt of Microsoft® Windows® 98 operating system.
In this case, the Build number of Microsoft® VM is "3802".


MS-DOS Prompt
Auto
Microsoft (R) Command-line Loader for Java Version 5.00.3802
Copyright (C) Microsoft Corp 1996-2000. All rights reserved.
Usage: JView [options] <classname> [arguments]
Options:
/? displays usage text
/cp <classpath> set class path
/cp:p <path> prepend path to class path
/cp:a <path> append path to class path
/n <namespace> namespace in which to run
/p pauses before terminating if an error occurs
/v verify all classes
/d:<name>=<value> define system property
/a execute AppletViewer
/vst print verbose stack traces (requires debug classes)
/prof[:options] enable profiling (/prof:? for help)
Classname:
.CLASS file to be executed.
Arguments:
command-line arguments to be passed on to the class file
C:\>

(b) Downloading Microsoft® VM
When Microsoft® VM has not been installed or the Build number of Microsoft® VM is earlier than "3309", download Microsoft® VM of the latest version (Windows® Update, etc.) from the Microsoft® Corporation Home Page.

(3) Downloading Sun Microsystems Inc. Java VM and confirming its version

(a) Downloading Sun Microsystems Inc. Java VM
When using Sun Microsystems Inc. Java VM, download it from the Sun Microsystems Inc. Home Page.

(b) Confirming version
The version can be confirmed by choosing the following.
[Control] → "Java Plug-in" → <<About>> tab → "Java(TM) Plug-in Control Panel" on Windows®

(c) Precautions for use of Java VM of Sun Microsystems Inc.

1) Installation
When installing Java VM of Sun Microsystems Inc. into an English operating system (OS), select Custom Setup and enable the "Support for Additional Languages" setting.

(4) Combinations of Operating Systems (OS) and Web browsers
The following table shows the combinations of the Operating Systems (OS) and Web browsers. The proper operation as a client computer has been confirmed.(∗1) (∗2)

Operating system (OS)	Web browser
Microsoft® Windows® XP Professional Operating System (English version)	Microsoft® Internet Explorer 6.0 (English version)
Microsoft® Windows® 2000 Professional Operating System (English version)	Microsoft® Internet Explorer 5.5/6.0 (English version)
Microsoft® Windows NT® Workstation Operating System Version 4.0 (English version)	Microsoft® Internet Explorer 5.5/6.0 (English version)
Microsoft® Windows® Millennium Edition Operating System (English version)	Microsoft® Internet Explorer 5.5/6.0 (English version)
Microsoft® Windows® 98 Operating System (English version)	Microsoft® Internet Explorer 5.5/6.0 (English version)
Microsoft® Windows® XP Professional Operating System (Japanese version)	Microsoft® Internet Explorer 6.0 (Japanese version)
Microsoft® Windows® 2000 Professional Operating System (Japanese version)	Microsoft® Internet Explorer 5.5/6.0 (Japanese version)
Microsoft® Windows NT® Workstation Operating System Version 4.0 (Japanese version)	Microsoft® Internet Explorer 5.5/6.0 (Japanese version)
Microsoft® Windows® Millennium Edition Operating System (Japanese version)	Microsoft® Internet Explorer 5.5/6.0 (Japanese version)
Microsoft® Windows® 98 Operating System (Japanese version)	Microsoft® Internet Explorer 5.5/6.0 (Japanese version)

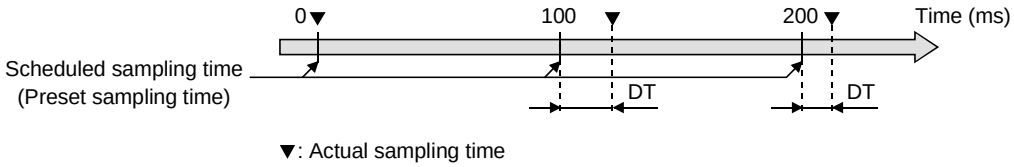
∗1 When displaying the TOP page of the standard screen using an operating system and a Web browser of English version, do not click on the "Japanese" button provided for link to the Japanese version.
Doing so may display an incorrect screen.

∗2 When displaying the standard screen of English version using an operating system and a Web browser of Japanese version, words and phrases used by the operating system (e.g. the "Cancel" button to a confirmation message) are displayed in Japanese.

(5) Relationship between scan time of PLC CPU and maximum delay time of high-speed sampling

DT = 2 × ST + 5 (unit: ms)

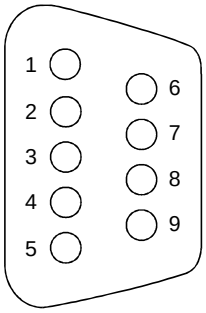
DT: Maximum delay time of high-speed sampling (See below)
ST: Scan time of PLC CPU



3.2 RS-232 Connector Specifications

The RS-232 connector specifications are shown below.

(1) RS-232 connector specifications



Pin No.	Signal abbreviation	Signal name	Signal direction Web server module ⟷ Modem
1	CD(DCD)	Data Carrier Detect	←
2	RD(RXD)	Received Data	←
3	SD(TXD)	Transmitted Data	→
4	ER(DTR)	Data Terminal Ready	→
5	SG(GND)	Signal Ground	⟷
6	DR(DSR)	Data Set Ready	←
7	RS(RTS)	Request To Send	→
8	CS(CTS)	Clear To Send	←
9	CI(RI)	Ring Indicator	←

(2) RS-232 interface connector

The Web server module uses the following RS-232 interface connector.

9 pin D-sub (Female) fixing type

Use either of the following products as a connector shell for the connection cable on the Web server module side.

- 3M
  Plug type: 8209-6009
  Shell type: 3702-2209 M2.6
- Tyco Electronics AMP K.K.
  Plug type: 747904-2
  Shell type: 747515 or 174469-2
- Connector fitting screw (M2.6)

3.3 Function List

The following is the function list of the Web server module.

Function		Description	Reference Section
Monitor Function	Device monitor	Monitors device values.	Section 6.2.1
	Tag data monitor	Monitors tag data.	Section 6.2.2
	Logging monitor	Monitors logging data.	Section 6.2.3
	Event history monitor	Monitors event histories.	Section 6.2.4
	PLC diagnostics monitor	Monitors PLC CPU operation status.	Section 6.2.5
	Self-diagnostics monitor	Monitors Web server module operation status.	Section 6.2.6
Tag function		Stores a set of device data of individual PLC CPUs on a network as a tag, and collects those device data in tag unit. Collected data can be displayed in the Web browser.	Section 6.3
Logging function		Stores tag data as a CSV file in time series at the user-specified execution timing (by setting timing, start/stop condition). The stored file can be displayed in the Web browser or downloaded by FTP operation, etc.	Section 6.4
Event monitor function		Monitors the PLC CPU status (CPU monitor), tag data (tag monitor) and time (time/interval monitor), and stores the historical data of occurred events into CSV files. The stored files can be can be displayed in the Web browser or downloaded by FTP operation. At event occurrence, e-mail can be sent as necessary.	Section 6.5
E-mail function		Used to send e-mail. ・E-mail transmission by PLC CPU ・E-mail transmission by event monitor function	Section 6.6
FTP function		Used to transfer a file between the Web server module and external device. ・FTP server function ・FTP client function	Section 6.7
Access log function		Used to record access from the external device to the Web server module.	Section 6.8
Address notification function		Used to notify the external device of the Web server module address.	Section 6.9
Data management function		Backs up/restores the standard ROM, formats the compact flash card, and performs CSV export/import.	Section 6.10
Diagnostic function		Used to perform self-diagnostics and connection test of the Web server module.	Section 6.11
User screen creation function		Creates user-original Web screens using the standard-supplied user parts (applet, SSI, CGI).	Chapter 7

3.4 Dedicated Instruction List

The following is a list of the dedicated instructions available for the Web server module.

Application	Instruction	Description	Reference Section
E-mail transmission	WMSEND	Sends e-mail.	Section 8.2
FTP	FTPPUT	Transfers (PUT) a file to the FTP server.	Section 8.3
	FTPGET	Transfers (GET) a file from the FTP server.	Section 8.4
Tag	TAG	Issues a tag collection command. (Triggers a tag collection.)	Section 8.5
Logging	LOG	Issues a logging command. (Triggers a logging.)	Section 8.6
	LOGDEL	Deletes the saved file of logging data.	Section 8.7
	WFWRITE	Writes the device data of the PLC CPU to the user data file on the compact flash card.	Section 8.8
	WFREAD	Reads the user data file on the compact flash card to the device data of the PLC CPU.	Section 8.9
	WFDEL	Deletes the user data file on the compact flash card.	Section 8.10

3.5 Web Browser Setting Item List

The following is a list of the parameter setting items to be set on a Web browser.

Item	Description	Reference Section
Top page	This screen is displayed first when the URL of the Web server module is specified.	—
Monitor screen	Monitors device data, tag data, logging data, event historical data, PLC diagnostics and self-diagnostics.	Section 6.2
Device monitor	Monitors device values.	
Tag data monitor	Monitors tag data.	
Logging monitor	Monitors logging data.	
Event history monitor	Monitors event historical data.	
PLC diagnostics monitor	Monitors PLC CPU operation status.	
Self-diagnostics monitor	Monitors Web server module operation status.	
Administrative menu	Allows initial setting, various function setting, setting test, etc. for use of the Web server module. Only the user with administrator authority can use this menu.	—
System setting	Makes the initial setting required for network connection. Be sure to perform this setting to use the Web server module.	Section 4.6.3
Dial-up setting	Makes setting required for Internet connection.	Section 4.6.4
Access target CPU setting	Sets the connection path to the access target CPU.	Section 4.6.7
Tag setting	Makes setting for tag data collection.	Section 6.3
Logging setting	Sets the logging intervals, file capacity, etc. of logging data.	Section 6.4
FTP setting	Makes the setting to log in to the FTP server.	Section 6.7
E-mail setting	Sets the send server, e-mail address, etc.	Section 6.6
Event setting	Sets the event monitor conditions.	Section 6.5
Address notification setting	Makes the setting to notify the external device of the Web server module's URL.	Section 6.9
Account setting	Sets the account for making access to the Web server module.	Section 4.6.5
IP filter setting	Sets the IP address at which access to the Web server module is enabled/disabled.	Section 4.6.6
Data management	Backs up, restores and formats the compact flash card, and performs CSV export/import.	Section 6.10
Setting test	Conducts connection tests such as e-mail transmission, file transfer and PING tests.	Section 6.11
Access log	Displays the access log to the Web server module.	Section 6.8
Setting update	Updates the setting made in the Administrative menu on the Web server module operation.	Section 4.6.2 (3)

3.6 I/O Signals for PLC CPU

3.6.1 I/O signals list

The following is the I/O signal list of the Web server module for the PLC CPU.
The assignment of the I/O signals is shown, assumed that the Web server module is mounted on Slot 0 of the main base unit.
If mounted on other than Slot 0, use the device numbers corresponding to the slot.
Device X indicates an input signal from the Web server module to the PLC CPU, and device Y indicates an output signal from the PLC CPU to the Web server module.

Signal Direction Web server module→PLC CPU		Signal Direction PLC CPU→Web server module	
Device No.	Signal name	Device No.	Signal name
X0	Module READY ON: Module prepared OFF: Watch dog timer error occurrence	Y0	Use prohibited
X1	Compact Flash™ card setting status ON: Set OFF: Not set	Y1	
X2	File access status ON: Stopped OFF: Operating	Y2	File access stop request ON: Stop requested OFF: −
X3	Use prohibited	Y3	File access stop cancel request ON: Stop request cancelled OFF: −
X4	Network connection status ON: Connected OFF: Not connected	Y4	Use prohibited
X5	Network connection processing ON: Processing OFF: −	Y5	Network connection request ON: Connection requested OFF: −
X6	Network connection completion ON: Connection completed OFF: −	Y6	Use prohibited
X7	Network disconnection processing ON: Processing OFF: −	Y7	Network disconnection request ON: Disconnection requested OFF: −
X8	Network disconnection completion ON: Disconnection completed OFF: −	Y8	Use prohibited
X9	Use prohibited	Y9	
XA		YA	Device write disable request ON: Disable OFF: Enable
XB		YB	Use prohibited
XC	For system	YC	
XD	CPU event status ON: Event occurrence OFF: Not occurred	YD	
XE	Tag event status ON: Event occurrence OFF: Not occurred	YE	
XF	Use prohibited	YF	

Signal Direction Web server module→PLC CPU		Signal Direction PLC CPU→Web server module	
Device No.	Signal name	Device No.	Signal name
X10	ERR. LED status ON: On, Flicker OFF: Off	Y10	Error clear request ON: Error clear requested OFF: −
X11	Tag collection error ON: Error occurrence OFF: Normal	Y11	Use prohibited
X12	Logging error ON: Error occurrence OFF: Normal	Y12	
X13	CPU event monitor error ON: Error occurrence OFF: Normal	Y13	
X14	Tag event monitor error ON: Error occurrence OFF: Normal	Y14	
X15	Time event monitor error ON: Error occurrence OFF: Normal	Y15	
X16	Access target CPU error ON: Error occurrence OFF: Normal	Y16	
X17	E-mail transmission error ON: Error occurrence OFF: Normal	Y17	
X18	FTP transfer error ON: Error occurrence OFF: Normal	Y18	
X19	Connection error ON: Error occurrence OFF: Normal	Y19	
X1A	Use prohibited	Y1A	
X1B		Y1B	
X1C	Other error ON: Error occurrence OFF: Normal	Y1C	
X1D	Use prohibited	Y1D	
X1E		Y1E	
X1F	Watch dog timer error ON: Error occurrence OFF: Normal	Y1F	

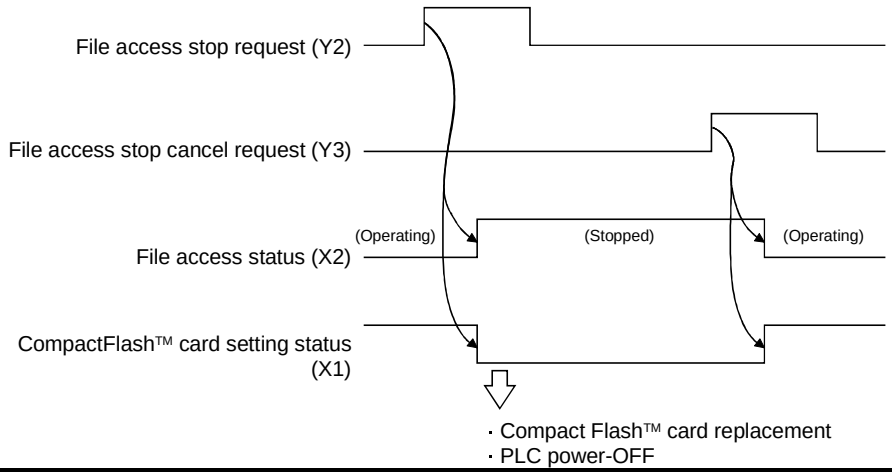
Important

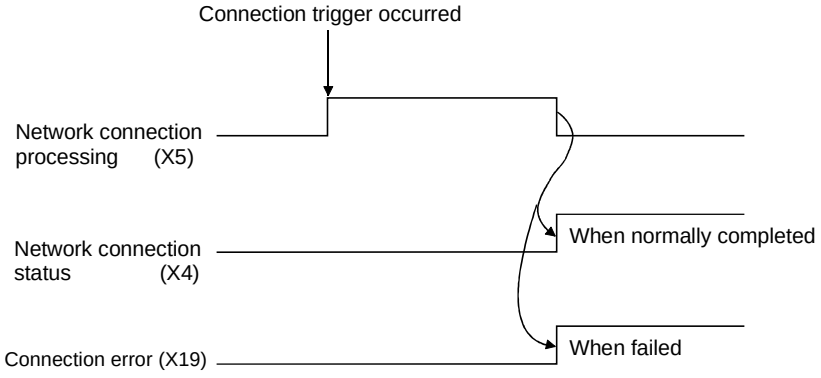
Do not output (turn on) the signal marked "use prohibited" among the I/O signals for the PLC CPU.
Doing so can cause malfunction of the PLC system.

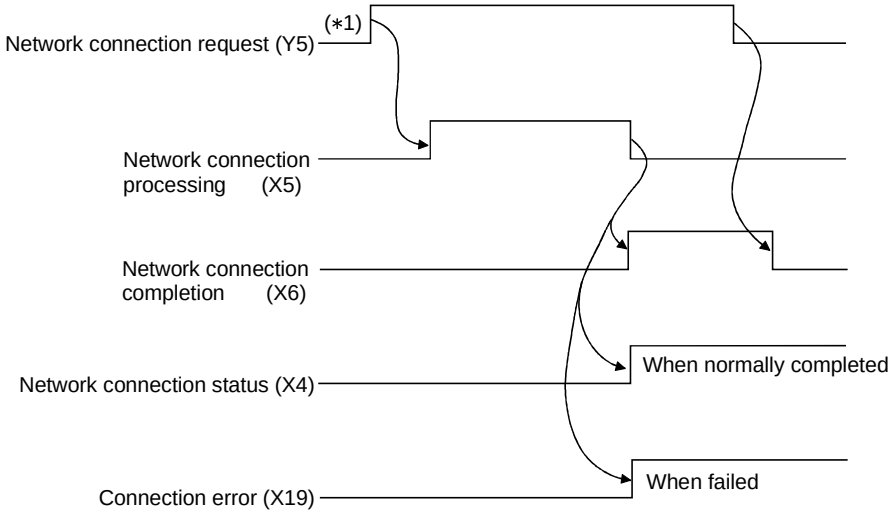
3.6.2 I/O signals details

The following table shows the details of the I/O signals of the Web server module.

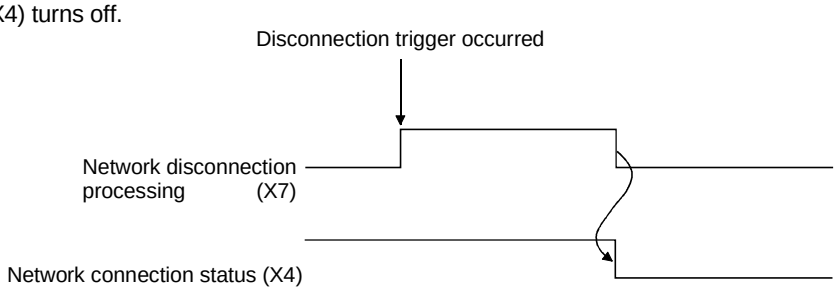
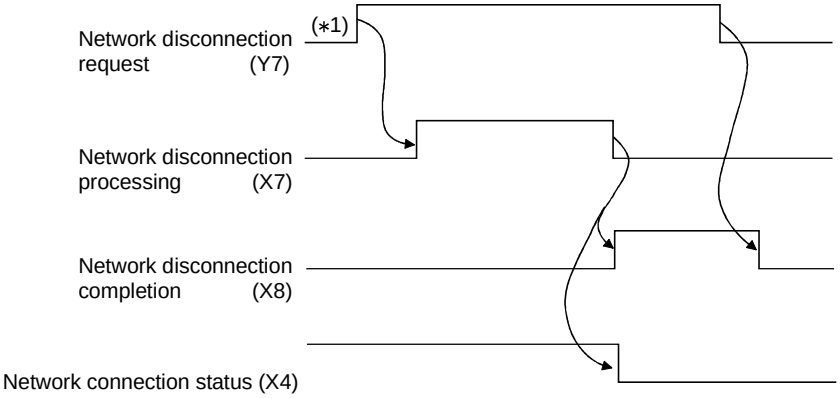
(1) Input signals

Device No.	Signal Name	Description
X0	Module READY	(1) Turns on when the Web server module becomes ready after the PLC is powered off and then on or the CPU module is reset. (2) Turns off when a watch dog timer error occurs in the Web server module.
X1	Compact Flash™ card setting status	(1) Turns on when the Compact Flash™ card is set and File access status (X2) is off. (2) Turns off when the Compact Flash™ card is not set or File access status (X2) is on.
X2	File access status	(1) Is on during file access stop. (*) The following operations are available during file access stop. (a) Removing and setting the Compact Flash™ card. (Refer to Section 4.9.) (b) Powering off during operation without battery. (Refer to Section 4.11.) * During file access stop, 1) Write of file to standard ROM is disabled. 2) Read from or write to Compact Flash™ card is disabled. 3) Tag collection, logging and event monitor are stopped. (2) Is off during file access operation. 

Device No.	Signal Name	Description
X4	Network connection status	(1) Turns on when the Web server module is connected to the network. (2) The Web server module is connected to the network. (Connection trigger) when: (a) The PLC is powered off and then on or the CPU module is reset when "Automatic connection to network at start-up." is set in the System setting. (Refer to Section 4.6.3) (b) Network connection request (Y5) is turned from OFF to ON. (c) A telephone call is made to the Web server module side modem when the CALL function is set. (Refer to Section 4.6.4) (d) E-mail transmission/file transfer is performed. (3) The Web server module is disconnected from the network (Disconnection trigger) when: (a) Network disconnection request (Y7) is turned from OFF to ON. (b) No access is made from the external device within the preset time when the disconnection function is set. (Refer to Section 4.6.4) (c) E-mail transmission/file transfer is completed (when connected for transmission/transfer (above (2) (d)) (d) Line disconnection is requested from the user screen (disconnection by line disconnection part) (e) Disconnection is made by the Internet service provider. (f) The modem is powered off or the cable is disconnected.
X5	Network connection processing	(1) Is on while the Web server module is processing for connection to the network (during dialing or authentication). Turns on in response to any of the connection triggers shown in (2) of X4. (2) Upon completion of the network connection processing, Network connection status (X4) or Connection error (X19) turns on. (a) When the network connection is normally completed, Network connection status (X4) turns on. (b) When the network connection is failed, Connection error (X19) turns on and a corresponding error code is stored into the connection error code area (buffer memory: 30). 

Device No.	Signal Name	Description
X6	Network connection completion	(1) Turns on at completion of connection made by Network connection request (Y5). Does not turn on by any connection trigger other than Network connection request (Y5) indicated in (2) of X4. (2) Turns off when Network connection request (Y5) turns off.  ∗1 When Network connection request (Y5) is turned on while Network connection status (X4) is on, Network connection processing (X5) turns off, and Network connection completion (X6) turns on immediately.

3 - 13

Device No.	Signal Name	Description
X7	Network disconnection processing	(1) Is on while the Web server module is processing for disconnection from the network. Turns on in response to any of the disconnection triggers shown in (3) of X4. (2) Upon completion of the network disconnection processing, Network connection status (X4) turns off. 
X8	Network disconnection completion	(1) Turns on at completion of disconnection made by Network disconnection request (Y7). Does not turn on by any connection trigger other than Network disconnection request (Y7) shown in (3) of X4. (2) Turns off when Network disconnection request (Y7) turns off.  *1 When Network disconnection request (Y7) is turned on while Network connection status (X4) is off, Network disconnection processing (X7) turns off, and Network disconnection completion (X8) turns on immediately.
XD	CPU event status	(1) Turns on when a CPU event occurs. (2) Turns off when a CPU event is restored.
XE	Tag event status	(1) Turns on when a tag event occurs. (2) Turns off when a tag event is restored.
X10	ERR. LED status	(1) Is on while the ERR. LED is on (during module continue error occurrence) or flickering (during module stop error occurrence). (2) Turns off when the ERR. LED turns off by turning on Error clear request (Y10) with the ERR. LED on. (Not for the case of flickering ERR. LED) (3) While the ERR. LED is on or flickering (when X10 is on), one (or more) of X11 to X19 and X1C turns on.
X11	Tag collection error	(1) Turns on when an error of the tag collection occurs. (2) When this turns on, an error code is stored into the tag status area (buffer memory: 1000 to 1075). (3) Turns off when Error clear request (Y10) is turned on.

Device No.	Signal Name	Description
X12	Logging error	(1) Turns on when a logging error occurs. (2) When this turns on, an error code is stored into the logging status area (buffer memory: 2000 to 2267). (3) Turns off when Error clear request (Y10) is turned on.
X13	CPU event monitor error	(1) Turns on when an error of CPU event monitor occurs. (2) When this turns on, an error code is stored into the CPU event monitor status area 1 (buffer memory: 3300 to 3375). (*) * The statuses of CPU monitor setting No. 1 to 16 are also stored into the CPU event monitor status area 2 (buffer memory: 3000 to 3018). (3) Turns off when Error clear request (Y10) is turned on.
X14	Tag event monitor error	(1) Turns on when an error of tag event monitor occurs. (2) When this turns on, an error code is stored into the tag event monitor status area 1 (buffer memory: 10000 to 10447). (*) * The statuses of tag monitor setting No. 1 to 16 are also stored into the tag event monitor status area 2 (buffer memory: 3100 to 3118). (3) Turns off when Error clear request (Y10) is turned on.
X15	Time event monitor error	(1) Turns on when an error of time event monitor occurs. (2) When this turns on, an error code is stored into the time/interval event monitor status area (buffer memory: 3200 to 3217). (3) Turns off when Error clear request (Y10) is turned on.
X16	Access target CPU error	(1) Turns on when a communication error of the access target CPU occurs. (2) When this turns on, an error code is stored into the access target CPU setting status area (buffer memory: 4000 to 4071). (3) Turns off when Error clear request (Y10) is turned on.
X17	E-mail transmission error	(1) Turns on when an e-mail transmission error occurs. (2) When this turns on, an error code is stored into the e-mail transmission status area (buffer memory: 5000 to 5984). (3) Turns off when Error clear request (Y10) is turned on.
X18	FTP transfer error	(1) Turns on when an FTP transfer error occurs. (2) When this turns on, an error code is stored into the following area of the buffer memory. (a) Error related to FTP transfer (PUT): FTP client status (PUT) area (buffer memory: 6002 to 6553) (b) Error related to FTP transfer (GET): FTP client status (GET) area (buffer memory: 8002 to 8553) (3) Turns off when Error clear request (Y10) is turned on.
X19	Connection error	(1) Turns on when network connection fails. (2) When this turns on, an error code is stored into the connection error code area (buffer memory: 30). (3) Turns off when Error clear request (Y10) is turned on.
X1C	Other error	(1) Turns on when an error not corresponding to X11 to X19 occurs. (2) When this turns on, the error code is stored into the error log area (buffer memory: 150 to 247). (3) Turns off when Error clear request (Y10) is turned on. (Only when the module continue error occurs)
X1F	Watch dog timer error	Turns on when a watch dog timer error occurs.

(2) Output signal details

Device No.	Signal Name	Description
Y2	File access stop request	(1) Turns on when file access is stopped. (2) Refer to X2 for ON/OFF timing.
Y3	File access stop cancel request	(1) Turns on when a file access stop is canceled. (2) Refer to X2 for ON/OFF timing.
Y5	Network connection request	(1) Turns on when the Web server module is connected to the network. (2) Refer to X6 for ON/OFF timing.
Y7	Network disconnection request	(1) Turns on when the Web server module is disconnected from the network. (2) Refer to X8 for ON/OFF timing.
YA	Device write disable request	(1) When this turns on, writing from the device test/tag component test by a write-authorized user is disabled. (2) When this turns off, writing from the device test/tag component test by a write-authorized user is enabled.
Y10	Error clear request	(1) Turning this on during module continue error occurrence (ERR. LED on) turns off the ERR. LED and X10 to X19 and X1C. (*) * The ERR. LED does not turn off if Y10 is turned on during module stop error occurrence (ERR. LED flicker). (2) Clears the current error area (address: 140 to 145) of the buffer memory. Clears the latest error code displayed in the system monitor of GX Developer. (Refer to Section 9.2.2)

3.7 Buffer memory list

The buffer memory addresses are listed below.

Address (Decimal)	Application	Name	Initial value	Reference section
0	Module status area	RUN LED status 0: Off 1: On	0	Section 4.3 (1)
1		ERR. LED status 0: Off 1: On 2: Flicker	0	
2		Switch 1 status (Mode setting) 0000_H : Online 0001_H : Hardware test 0002_H : CH1 self-loopback test 0003_H : CH2 self-loopback test $270F_H$ (9999) : Module initialization mode	0	Section 4.7
3		Switch 2 status (Default operation setting/battery error detection setting/logging monitor setting) 1) Default operation setting (Account setting) (b0) 0: Operates according to the account setting. 1: Operates according to the default account setting. 2) Default operation setting (System setting/IP filter setting) (b1) 0: Operates according to the system setting/IP filter setting. 1: Operates according to the default system setting/IP filter setting. 3) Battery error detection setting (b2) 0: Detects battery error. 1: Not detect battery error. 4) Logging monitor setting (b4) 0: Displays the last update time of the file. 0: Not display the last update time of the file.	0	
4		Switch 3 status (Response monitoring time setting) 15 to 255 (second): Response monitoring time (*) * When switch setting 3 is not set or any of 0 to 14 has been set, the response monitoring time is 15 seconds.	0	
5 to 6	Use prohibited	System area	—	—
7	Module status area	Battery status 0: Normal 1: Battery error occurrence	0	Section 4.10.3
8 to 9	Use prohibited	System area	—	—
10 to 11	Module status area	Number of standard ROM erasure	0	Section 3.1 Remarks
12 to 27	Use prohibited	System area	—	—
28 to 29	Network connection status area (*1)	Router external IP address	0	Section 3.8.2
30	Network connection status area	Connection error code 0: Normal Other than 0: Error code	0	Section 3.8.2
31		Number of successful connection	0	
32		Number of failed connection	0	
33		Number of connection tries by request signal (Y5)	0	
34		Number of connection tries by automatic connection	0	
35		Number of reconnection tries	0	
36		Number of times of connection retry occurrence	0	
37		Number of disconnection	0	
38		Number of disconnection by request signal (Y7)	0	
39		Number of automatic disconnection	0	
40		Number of line lost times	0	
41 to 42		Total connection time (Unit: Minute)	0	
43 to 44		LAN connection time (Unit: Minute)	0	
45 to 46		Modem connection time (Unit: Minute)	0	
47 to 48	Use prohibited	System area	—	—

(Continued on the next page)

(From the preceding page)

Address (Decimal)	Application	Name	Initial value	Reference section
49 to 50	Network connection status area	ADSL connection time (Unit: Minute)	0	Section 3.8.2
51 to 52	Use prohibited	System area	—	—
53 to 54	Network connection status area	Current connection time (Unit: Minute)	0	Section 3.8.2
55 to 56		IP address	0	
57 to 58		Subnet mask	0	
59 to 60		Default gateway	0	
61 to 62		DNS server address 1	0	
63 to 64		DNS server address 2	0	
65		HTTP port number	0	
66		Connection method 0: LAN 1: Modem 3: ADSL	0	
67		Access point 1 to 3: Access point number being used	0	
68	Network connection status area (*1)	FTP port number	0	Section 3.8.2
69		Number of disconnections from user screen (number of disconnections using line disconnection part)	0	
70	System setting status area	IP address setting 0: "Obtain an IP address automatically." 1: "Use the following IP address."	0	Section 4.6.3
71 to 72		IP address setting: IP address	C0A80303H	
73 to 74		IP address setting: Subnet mask	FFFFFF00H	
75 to 76		IP address setting: Default gateway	0	
77 to 78		DNS server setting: DNS server address 1	0	
79 to 80		DNS server setting: DNS server address 2	0	
81		Web server setting 0 to 1023 : "Use the default HTTP port number (80)." 1024 to 65535 : "Use the following HTTP port number."	0	
82		Network type setting 0: "Connecting through LAN or the router." 1: "Dial-up to the network (modem, ADSL)."	0	
83	System setting status area (*1)	Automatic network connection setting at start-up 0: "No connection to network at start-up." 1: "Automatic connection to network at start-up."	0	Section 4.6.3
84		FTP server setting 0 to 1023 : "Use the default FTP port number (21)." 1024 to 65535 : "Use the following FTP port number."	0	
85		Web server setting Register the HTTP port number to NAT of the router. 0: Not register 1: Register	0	
86		FTP server setting Register the FTP port number to NAT of the router. 0: Not register 1: Register	0	
87 to 89	Use prohibited	System area	—	—
90	Dial-up setting status area	Dial method 0: Tone 1: Pulse	0	Section 4.6.4
91		Retry: Number of retries.	0	
92		Retry: Change access point automatically. 0: None 1: Provided	0	
93		Modem attribute: Communication speed (Unit: bps)	0	

(Continued on the next page)

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(From the preceding page)

Address (Decimal)	Application	Name		Initial value	Reference section
94 to 97	Use prohibited	System area		—	—
98	Dial-up setting status area	Modem attribute: Call timeout (Unit: Second)		0	Section 4.6.4
99		Modem attribute: Dial pause time (Unit: Second)		0	
100 to 132		Modem attribute: Addition set Addition AT command string		0	
133		Modem attribute: CALL function 0: None 1: Provided		0	
134		Modem attribute: Disconnect function, Disconnect time (Unit: Minute)		0	
135 to 139	Use prohibited	System area		—	—
140	Current error (*1)	Error code 0: Normal Other than 0: Error code		0	Section 3.8.5
141		System area (Use prohibited)		—	—
142 to 145		Time		0	Section 3.8.5
146 to 149	Use prohibited	System area		—	—
150	Error log	Number of times of error occurrence		0	Section 3.8.6
151		Error log write pointer		0	
152		Error log 1	Error code 0: Normal Other than 0: Error code	0	
153			System area (Use prohibited)	—	—
154 to 157			Date and time	0	Section 3.8.6
158 to 163		Error log 2	(Same as Error log 1)		
164 to 169		Error log 3	(Same as Error log 1)		
170 to 175		Error log 4	(Same as Error log 1)		
176 to 181		Error log 5	(Same as Error log 1)		
182 to 187		Error log 6	(Same as Error log 1)		
188 to 193		Error log 7	(Same as Error log 1)		
194 to 199		Error log 8	(Same as Error log 1)		
200 to 205		Error log 9	(Same as Error log 1)		
206 to 211		Error log 10	(Same as Error log 1)		
212 to 217		Error log 11	(Same as Error log 1)		
218 to 223		Error log 12	(Same as Error log 1)		
224 to 229		Error log 13	(Same as Error log 1)		
230 to 235		Error log 14	(Same as Error log 1)		
236 to 241		Error log 15	(Same as Error log 1)		
242 to 247		Error log 16	(Same as Error log 1)		
248 to 249	Use prohibited	System area		—	—

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(From the preceding page)

Address (Decimal)	Application	Name		Initial value	Reference section
250 to 251	Login history	Number of login times		0	Section 3.8.7
252		Login history write pointer		0	
253		Login history 1	User number	0	
254 to 255			Source IP address	0	
256			Login type 1: Web login 2: FTP login	0	
257 to 260			Date and Time	0	
261 to 268		Login history 2	(Same as Login history 1)		
269 to 276		Login history 3	(Same as Login history 1)		
277 to 284		Login history 4	(Same as Login history 1)		
285 to 292		Login history 5	(Same as Login history 1)		
293 to 300		Login history 6	(Same as Login history 1)		
301 to 308		Login history 7	(Same as Login history 1)		
309 to 316		Login history 8	(Same as Login history 1)		
317 to 324		Login history 9	(Same as Login history 1)		
325 to 332		Login history 10	(Same as Login history 1)		
333 to 340		Login history 11	(Same as Login history 1)		
341 to 348		Login history 12	(Same as Login history 1)		
349 to 356		Login history 13	(Same as Login history 1)		
357 to 364		Login history 14	(Same as Login history 1)		
365 to 372		Login history 15	(Same as Login history 1)		
373 to 380		Login history 16	(Same as Login history 1)		
381	Use prohibited	System area		—	—
382 to 383	IP filter (＊1)	Number of times when IP packet is blocked		0	Section 3.8.8
384 to 799	Use prohibited	System area		—	—
800 to 801	Collection monitor cycle	Current cycle (Unit: Second)		0	Section 3.8.9
802 to 803		Maximum cycle (Unit: Second)		0	
804 to 999	Use prohibited	System area		—	—
1000 to 1003	Tag status	Tag setting data		0	Section 3.8.10
1004 to 1007		Tag collection data		0	
1008 to 1011		Tag collection error data		0	
1012		Tag collection 1 error code		0	
1013 to 1075		Tag collection 2 to 64 error codes	The composition of each area is the same as that of the tag collection 1 error code. Refer to ＊2 for assignment of each area.		
1076 to 1999	Use prohibited	System area		—	—
2000 to 2003	Logging status	Logging setting data		0	Section 3.8.11
2004 to 2007		Logging execute data		0	
2008 to 2011		Logging error data		0	
2012		Logging 1 data	Error code 0: Normal Other than 0: Error code	0	
2013			Number of saved files	0	
2014 to 2015			Number of the latest saved file	0	
2016 to 2267		Logging 2 to 64 data	The composition of each area is the same as that of the logging 1 data. Refer to ＊3 for assignment of each area.		
2268 to 2999	Use prohibited	System area		—	—

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(From the preceding page)

Address (Decimal)	Application	Name	Initial value	Reference section
3000	CPU event monitor status 2	CPU event setting data	0	Section 3.8.13
3001		CPU event occurrence data	0	
3002		CPU event monitor error data	0	
3003		CPU event monitor 1 error code	0	
3004		CPU event monitor 2 error code	0	
3005		CPU event monitor 3 error code	0	
3006		CPU event monitor 4 error code	0	
3007		CPU event monitor 5 error code	0	
3008		CPU event monitor 6 error code	0	
3009		CPU event monitor 7 error code	0	
3010		CPU event monitor 8 error code	0	
3011		CPU event monitor 9 error code	0	
3012		CPU event monitor 10 error code	0	
3013		CPU event monitor 11 error code	0	
3014		CPU event monitor 12 error code	0	
3015		CPU event monitor 13 error code	0	
3016		CPU event monitor 14 error code	0	
3017		CPU event monitor 15 error code	0	
3018		CPU event monitor 16 error code	0	
3019 to 3099	Use prohibited	System area	—	—
3100	Tag event monitor status 2	Tag event setting data	0	Section 3.8.15
3101		Tag event occurrence data	0	
3102		Tag event monitor error data	0	
3103		Tag event monitor 1 error code	0	
3104		Tag event monitor 2 error code	0	
3105		Tag event monitor 3 error code	0	
3106		Tag event monitor 4 error code	0	
3107		Tag event monitor 5 error code	0	
3108		Tag event monitor 6 error code	0	
3109		Tag event monitor 7 error code	0	
3110		Tag event monitor 8 error code	0	
3111		Tag event monitor 9 error code	0	
3112		Tag event monitor 10 error code	0	
3113		Tag event monitor 11 error code	0	
3114		Tag event monitor 12 error code	0	
3115		Tag event monitor 13 error code	0	
3116		Tag event monitor 14 error code	0	
3117		Tag event monitor 15 error code	0	
3118		Tag event monitor 16 error code	0	
3119	Use prohibited	System area	—	—

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(From the preceding page)

Address (Decimal)	Application	Name	Initial value	Reference section
3200	Time/Interval event monitor status	Time event setting data	0	Section 3.8.16
3201		Time event monitor error data	0	
3202		Time event monitor 1 error code	0	
3203		Time event monitor 2 error code	0	
3204		Time event monitor 3 error code	0	
3205		Time event monitor 4 error code	0	
3206		Time event monitor 5 error code	0	
3207		Time event monitor 6 error code	0	
3208		Time event monitor 7 error code	0	
3209		Time event monitor 8 error code	0	
3210		Time event monitor 9 error code	0	
3211		Time event monitor 10 error code	0	
3212		Time event monitor 11 error code	0	
3213		Time event monitor 12 error code	0	
3214		Time event monitor 13 error code	0	
3215		Time event monitor 14 error code	0	
3216		Time event monitor 15 error code	0	
3217		Time event monitor 16 error code	0	
3218 to 3299	Use prohibited	System area	—	—
3300 to 3303	CPU event monitor status 1 (＊1)	CPU event monitor setting data	0	Section 3.8.12
3304 to 3307		CPU event occurrence data	0	
3308 to 3311		CPU event monitor error data	0	
3312		CPU event monitor 1 error code	0	
3313 to 3375		CPU event monitor 2 to 64 error code	The composition of each area is the same as that of the CPU event monitor 1 error code. Refer to ＊4 for assignment of each area.	
3376 to 3999	Use prohibited	System area	—	—
4000 to 4003	Access target CPU setting status	Access target CPU setting data	0	Section 3.8.17
4004 to 4007		Access target CPU error data	0	
4008		Access target CPU 1 error code	0	
4009 to 4071		Access target CPU 2 to 64 error code	The composition of each area is the same as that of the access target CPU 1 error code. Refer to ＊5 for assignment of each area.	
4072 to 4999	Use prohibited	System area	—	—

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(From the preceding page)

Address (Decimal)	Application	Name		Initial value	Reference section
5000	E-mail transmission status	Number of times when WMSEND instruction was normally completed		0	Section 3.8.18
5001		Number of times when WMSEND instruction failed		0	
5002		Number of normally completed e-mail transmission		0	
5003		Number of sent attached files		0	
5004		Number of undelivered e-mails		0	
5005		Number of writes for error log		0	
5006		Error log write pointer		0	
5007		Error log 1	Error code	0	
5008			To	0	
5009 to 5023			Subject	0	
5024 to 5027			Date	0	
5028 to 5048		Error log 2	(Same as Error log 1)		
5049 to 5069		Error log 3	(Same as Error log 1)		
5070 to 5090		Error log 4	(Same as Error log 1)		
5091 to 5111		Error log 5	(Same as Error log 1)		
5112 to 5132		Error log 6	(Same as Error log 1)		
5133 to 5153		Error log 7	(Same as Error log 1)		
5154 to 5174		Error log 8	(Same as Error log 1)		
5175 to 5195		Error log 9	(Same as Error log 1)		
5196 to 5216		Error log 10	(Same as Error log 1)		
5217 to 5237		Error log 11	(Same as Error log 1)		
5238 to 5258		Error log 12	(Same as Error log 1)		
5259 to 5279		Error log 13	(Same as Error log 1)		
5280 to 5300		Error log 14	(Same as Error log 1)		
5301 to 5321		Error log 15	(Same as Error log 1)		
5322 to 5342		Error log 16	(Same as Error log 1)		
5343	E-mail transmission status (*1)	Transmission log write count		0	Section 3.8.18
5344		Transmission log write pointer		0	
5345		Transmission log 1	To	0	
5346 to 5360			Subject	0	
5361 to 5364			Date	0	
5365 to 5984		Transmission log 2 to 32	The composition of each area is the same as that of the transmission log 1. Refer to *6 for assignment of each area.		
5985 to 5999	Use prohibited	System area		—	—

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(From the preceding page)

Address (Decimal)	Application	Name		Initial value	Reference section
6000	FTP server status	Number of successful logins		0	Section 3.8.19
6001		Number of failed logins		0	
6002	FTP client Status (PUT)	Number of times when the FTPPUT instruction was normally completed		0	Section 3.8.20
6003		Number of times when the FTPPUT instruction was abnormally completed		0	
6004		Number of normally completed FTP transfers (PUT)		0	
6005		Number of abnormally completed FTP transfers (PUT)		0	
6006		Number of writes for error log		0	
6007		Error log write pointer		0	
6008		Error log 1	Error code	0	
6009			Transfer destination	0	
6010 to 6015			Transferred file name	0	
6016 to 6019			Date	0	
6020 to 6031		Error log 2	(Same as Error log 1)		
6032 to 6043		Error log 3	(Same as Error log 1)		
6044 to 6055		Error log 4	(Same as Error log 1)		
6056 to 6067		Error log 5	(Same as Error log 1)		
6068 to 6079		Error log 6	(Same as Error log 1)		
6080 to 6091		Error log 7	(Same as Error log 1)		
6092 to 6103		Error log 8	(Same as Error log 1)		
6104 to 6115		Error log 9	(Same as Error log 1)		
6116 to 6127		Error log 10	(Same as Error log 1)		
6128 to 6139		Error log 11	(Same as Error log 1)		
6140 to 6151		Error log 12	(Same as Error log 1)		
6152 to 6163		Error log 13	(Same as Error log 1)		
6164 to 6175		Error log 14	(Same as Error log 1)		
6176 to 6187		Error log 15	(Same as Error log 1)		
6188 to 6199		Error log 16	(Same as Error log 1)		
6200	FTP client status (PUT) (＊1)	Transfer log write count		0	Section 3.8.20
6201		Transfer log write pointer		0	
6202		Transfer log 1	Transfer destination	0	
6203 to 6208			Transferred file name	0	
6209 to 6212			Data	0	
6213 to 6553		Transfer log 2 to 32	The composition of each area is the same as that of the transfer log 1. Refer to ＊7 for assignment of each area.		
6554 to 8001	Use prohibited	System area		—	—

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(From the preceding page)

Address (Decimal)	Application	Name		Initial value	Reference section
8002	FTP client status (GET) (*1)	Number of times when the FTPGET instruction was normally completed		0	Section 3.8.21
8003		Number of times when the FTPGET instruction was abnormally completed		0	
8004		Number of normally completed FTP transfers (GET)		0	
8005		Number of abnormally completed FTP transfers (GET)		0	
8006		Number of writes for error log		0	
8007		Error log write pointer		0	
8008		Error log 1	Error code	0	
8009			Transfer source	0	
8010 to 8015			Transferred file name	0	
8016 to 8019			Data	0	
8020 to 8031		Error log 2	(Same as Error log 1)		
8032 to 8043		Error log 3	(Same as Error log 1)		
8044 to 8055		Error log 4	(Same as Error log 1)		
8056 to 8067		Error log 5	(Same as Error log 1)		
8068 to 8079		Error log 6	(Same as Error log 1)		
8080 to 8091		Error log 7	(Same as Error log 1)		
8092 to 8103		Error log 8	(Same as Error log 1)		
8104 to 8115		Error log 9	(Same as Error log 1)		
8116 to 8127		Error log 10	(Same as Error log 1)		
8128 to 8139		Error log 11	(Same as Error log 1)		
8140 to 8151		Error log 12	(Same as Error log 1)		
8152 to 8163		Error log 13	(Same as Error log 1)		
8164 to 8175		Error log 14	(Same as Error log 1)		
8176 to 8187		Error log 15	(Same as Error log 1)		
8188 to 8199		Error log 16	(Same as Error log 1)		
8200		Transfer log write count		0	
8201		Transfer log write pointer		0	
8202		Transfer log 1	Transfer source	0	
8203 to 8208			Transferred file name	0	
8209 to 8212			Data	0	
8213 to 8553		Transfer log 2 to 32	The composition of each area is the same as that of the transfer log 1. Refer to *8 for assignment of each area.		
8554 to 9998	Use prohibited	System area		—	—
9999	Module initialization request	Module initialization request 0: No request 1: During module initialization mode (The system is set up when the CPU module is reset) 2: Module initialization request 3: Completed (The system is set up.) Other than 3: Failed (The system is set up.)		0	Section 4.13
10000 to 10015	Tag event monitor status 1 (*1)	Tag event monitor setting data		0	Section 3.8.14
10016 to 10063	Use prohibited	System area		—	—
10064 to 10079	Tag event monitor status 1 (*1)	Tag event occurrence data		0	Section 3.8.14
10080 to 10127	Use prohibited	System area		—	—
10128 to 10143	Tag event monitor status 1 (*1)	Tag event monitor error data		0	Section 3.8.14
10144 to 10191	Use prohibited	System area		—	—
10192	Tag event monitor status 1 (*1)	Tag event monitor 1 error code		0	Section 3.8.14
10193 to 10447		Tag event monitor 2 to 256 error code	The composition of each area is the same as that of the tag event monitor 1 error code 1. Refer to *9 for assignment of each area.		

*1 Can be used in the product whose first 5 digits of serial No. are 05112 or later.
(Assigned as system area for the product earlier than that)

*2 The following shows the assignment of error code area for the tag collection 1 to 64 (address: 1012 to 1075).

Name	Tag Collection 1 to 64 Error Code Area									
	1	2	3	4	5	6	7	8	9	10
Error code	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021
	11	12	13	14	15	16	17	18	19	20
Error code	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031
	21	22	23	24	25	26	27	28	29	30
Error code	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041
	31	32	33	34	35	36	37	38	39	40
Error code	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051
	41	42	43	44	45	46	47	48	49	50
Error code	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061
	51	52	53	54	55	56	57	58	59	60
Error code	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071
	61	62	63	64						
Error code	1072	1073	1074	1075						

*3 The following shows the assignment of the logging 1 to 64 data area (address: 2012 to 2267).

Name	Logging 1 to 64 Data Area									
	1	2	3	4	5	6	7	8	9	10
Error code	2012	2016	2020	2024	2028	2032	2036	2040	2044	2048
Number of saved files	2013	2017	2021	2025	2029	2033	2037	2041	2045	2049
Number of the latest saved file	2014, 2015	2018, 2019	2022, 2023	2026, 2027	2030, 2031	2034, 2035	2038, 2039	2042, 2043	2046, 2047	2050, 2051
	11	12	13	14	15	16	17	18	19	20
Error code	2052	2056	2060	2064	2068	2072	2076	2080	2084	2088
Number of saved files	2053	2057	2061	2065	2069	2073	2077	2081	2085	2089
Number of the latest saved file	2054, 2055	2058, 2059	2062, 2063	2066, 2067	2070, 2071	2074, 2075	2078, 2079	2082, 2083	2086, 2087	2090, 2091
	21	22	23	24	25	26	27	28	29	30
Error code	2092	2096	2100	2104	2108	2112	2116	2120	2124	2128
Number of saved files	2093	2097	2101	2105	2109	2113	2117	2121	2125	2129
Number of the latest saved file	2094, 2095	2098, 2099	2102, 2103	2106, 2107	2110, 2111	2114, 2115	2118, 2119	2122, 2123	2126, 2127	2130, 2131
	31	32	33	34	35	36	37	38	39	40
Error code	2132	2136	2140	2144	2148	2152	2156	2160	2164	2168
Number of saved files	2133	2137	2141	2145	2149	2153	2157	2161	2165	2169
Number of the latest saved file	2134, 2135	2138, 2139	2142, 2143	2146, 2147	2150, 2151	2154, 2155	2158, 2159	2162, 2163	2166, 2167	2170, 2171

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Name	Logging 1 to 64 Data Area									
	41	42	43	44	45	46	47	48	49	50
Error code	2172	2176	2180	2184	2188	2192	2196	2200	2204	2208
Number of saved files	2173	2177	2181	2185	2189	2193	2197	2201	2205	2209
Number of the latest saved file	2174, 2175	2178, 2179	2182, 2183	2186, 2187	2190, 2191	2194, 2195	2198, 2199	2202, 2203	2206, 2207	2210, 2211
	51	52	53	54	55	56	57	58	59	60
Error code	2212	2216	2220	2224	2228	2232	2236	2240	2244	2248
Number of saved files	2213	2217	2221	2225	2229	2233	2237	2241	2245	2249
Number of the latest saved file	2214, 2215	2218, 2219	2222, 2223	2226, 2227	2230, 2231	2234, 2235	2238, 2239	2242, 2243	2246, 2247	2250, 2251
	61	62	63	64						
Error code	2252	2256	2260	2264						
Number of saved files	2253	2257	2261	2265						
Number of the latest saved file	2254, 2255	2258, 2259	2262, 2263	2266, 2267						

*4 The following shows the assignment of the CPU event monitor 1 to 64 error code area (address: 3312 to 3375).

Name	CPU Event Monitor 1 to 64 Error Code Area									
	1	2	3	4	5	6	7	8	9	10
Error code	3312	3313	3314	3315	3316	3317	3318	3319	3320	3321
	11	12	13	14	15	16	17	18	19	20
Error code	3322	3323	3324	3325	3326	3327	3328	3329	3330	3331
	21	22	23	24	25	26	27	28	29	30
Error code	3332	3333	3334	3335	3336	3337	3338	3339	3340	3341
	31	32	33	34	35	36	37	38	39	40
Error code	3342	3343	3344	3345	3346	3347	3348	3349	3350	3351
	41	42	43	44	45	46	47	48	49	50
Error code	3352	3353	3354	3355	3356	3357	3358	3359	3360	3361
	51	52	53	54	55	56	57	58	59	60
Error code	3362	3363	3364	3365	3366	3367	3368	3369	3370	3371
	61	62	63	64						
Error code	3372	3373	3374	3375						

*5 The following shows the assignment of error code area for the access target CPU 1 to 64 (address: 4008 to 4071).

Name	Access Target CPU 1 to 64 Error Code Area									
	1	2	3	4	5	6	7	8	9	10
Error code	4008	4009	4010	4011	4012	4013	4014	4015	4016	4017
	11	12	13	14	15	16	17	18	19	20
Error code	4018	4019	4020	4021	4022	4023	4024	4025	4026	4027
	21	22	23	24	25	26	27	28	29	30
Error code	4028	4029	4030	4031	4032	4033	4034	4035	4036	4037
	31	32	33	34	35	36	37	38	39	40
Error code	4038	4039	4040	4041	4042	4043	4044	4045	4046	4047
	41	42	43	44	45	46	47	48	49	50
Error code	4048	4049	4050	4051	4052	4053	4054	4055	4056	4057
	51	52	53	54	55	56	57	58	59	60
Error code	4058	4059	4060	4061	4062	4063	4064	4065	4066	4067
	61	62	63	64						
Error code	4068	4069	4070	4071						

*6 The following shows the assignment of the transmission log 1 to 32 area (address: 5345 to 5984).

Name	Transmission Log 1 to 32 Area									
	1	2	3	4	5	6	7	8	9	10
To	5345	5365	5385	5405	5425	5445	5465	5485	5505	5525
Subject	5346 to 5360	5366 to 5380	5386 to 5400	5406 to 5420	5426 to 5440	5446 to 5460	5466 to 5480	5486 to 5500	5506 to 5520	5526 to 5540
Date	5361 to 5364	5381 to 5384	5401 to 5404	5421 to 5424	5441 to 5444	5461 to 5464	5481 to 5484	5501 to 5504	5521 to 5524	5541 to 5544
	11	12	13	14	15	16	17	18	19	20
To	5545	5565	5585	5605	5625	5645	5665	5685	5705	5725
Subject	5546 to 5560	5566 to 5580	5586 to 5600	5606 to 5620	5626 to 5640	5646 to 5660	5666 to 5680	5686 to 5700	5706 to 5720	5726 to 5740
Date	5561 to 5564	5581 to 5584	5601 to 5604	5621 to 5624	5641 to 5644	5661 to 5664	5681 to 5684	5701 to 5704	5721 to 5724	5741 to 5744
	21	22	23	24	25	26	27	28	29	30
To	5745	5765	5785	5805	5825	5845	5865	5885	5905	5925
Subject	5746 to 5760	5766 to 5780	5786 to 5800	5806 to 5820	5826 to 5840	5846 to 5860	5866 to 5880	5886 to 5900	5906 to 5920	5926 to 5940
Date	5761 to 5764	5781 to 5784	5801 to 5804	5821 to 5824	5841 to 5844	5861 to 5864	5881 to 5884	5901 to 5904	5921 to 5924	5941 to 5944
	31	32								
To	5945	5965								
Subject	5946 to 5960	5966 to 5980								
Date	5961 to 5964	5981 to 5984								

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*7 The following shows the assignment of the transfer (PUT) log 1 to 32 area (address: 6202 to 6553).

Name	Transfer (PUT) Log 1 to 32 Area									
	1	2	3	4	5	6	7	8	9	10
Transfer destination	6202	6213	6224	6235	6246	6257	6268	6279	6290	6301
Transferred file name	6203 to 6208	6214 to 6219	6225 to 6230	6236 to 6241	6247 to 6252	6258 to 6263	6269 to 6274	6280 to 6285	6291 to 6296	6302 to 6307
Date	6209 to 6212	6220 to 6223	6231 to 6234	6242 to 6245	6253 to 6256	6264 to 6267	6275 to 6278	6286 to 6289	6297 to 6300	6308 to 6311
	11	12	13	14	15	16	17	18	19	20
Transfer destination	6312	6323	6334	6345	6356	6367	6378	6389	6400	6411
Transferred file name	6313 to 6318	6324 to 6329	6335 to 6340	6346 to 6351	6357 to 6362	6368 to 6373	6379 to 6384	6390 to 6395	6401 to 6406	6412 to 6417
Date	6319 to 6322	6330 to 6333	6341 to 6344	6352 to 6355	6363 to 6366	6374 to 6377	6385 to 6388	6396 to 6399	6407 to 6410	6418 to 6421
	21	22	23	24	25	26	27	28	29	30
Transfer destination	6422	6433	6444	6455	6466	6477	6488	6499	6510	6521
Transferred file name	6423 to 6428	6434 to 6439	6445 to 6450	6456 to 6461	6467 to 6472	6478 to 6483	6489 to 6494	6500 to 6505	6511 to 6516	6522 to 6527
Date	6429 to 6432	6440 to 6443	6451 to 6454	6462 to 6465	6473 to 6476	6484 to 6487	6495 to 6498	6506 to 6509	6517 to 6520	6528 to 6531
	31	32								
Transfer destination	6532	6543								
Transferred file name	6533 to 6538	6544 to 6549								
Date	6539 to 6542	6550 to 6553								

*8 The following shows the assignment of the transfer (GET) log 1 to 32 area (address: 8202 to 8553).

Name	Transfer (GET) Log 1 to 32 Area									
	1	2	3	4	5	6	7	8	9	10
Transfer source	8202	8213	8224	8235	8246	8257	8268	8279	8290	8301
Transferred file name	8203 to 8208	8214 to 8219	8225 to 8230	8236 to 8241	8247 to 8252	8258 to 8263	8269 to 8274	8280 to 8285	8291 to 8296	8302 to 8307
Date	8209 to 8212	8220 to 8223	8231 to 8234	8242 to 8245	8253 to 8256	8264 to 8267	8275 to 8278	8286 to 8289	8297 to 8300	8308 to 8311
	11	12	13	14	15	16	17	18	19	20
Transfer source	8312	8323	8334	8345	8356	8367	8378	8389	8400	8411
Transferred file name	8313 to 8318	8324 to 8329	8335 to 8340	8346 to 8351	8357 to 8362	8368 to 8373	8379 to 8384	8390 to 8395	8401 to 8406	8412 to 8417
Date	8319 to 8322	8330 to 8333	8341 to 8344	8352 to 8355	8363 to 8366	8374 to 8377	8385 to 8388	8396 to 8399	8407 to 8410	8418 to 8421
	21	22	23	24	25	26	27	28	29	30
Transfer source	8422	8433	8444	8455	8466	8477	8488	8499	8510	8521
Transferred file name	8423 to 8428	8434 to 8439	8445 to 8450	8456 to 8461	8467 to 8472	8478 to 8483	8489 to 8494	8500 to 8505	8511 to 8516	8522 to 8527
Date	8429 to 8432	8440 to 8443	8451 to 8454	8462 to 8465	8473 to 8476	8484 to 8487	8495 to 8498	8506 to 8509	8517 to 8520	8528 to 8531
	31	32								
Transfer source	8532	8543								
Transferred file name	8533 to 8538	8544 to 8549								
Date	8539 to 8542	8550 to 8553								

*9 The following shows the assignment of the tag event monitor 1 to 256 error code area (address: 10192 to 10447).

Name	Tag Event Monitor 1 to 256 Error Code Area									
	1	2	3	4	5	6	7	8	9	10
Error code	10192	10193	10194	10195	10196	10197	10198	10199	10200	10201
	11	12	13	14	15	16	17	18	19	20
Error code	10202	10203	10204	10205	10206	10207	10208	10209	10210	10211
	21	22	23	24	25	26	27	28	29	30
Error code	10212	10213	10214	10215	10216	10217	10218	10219	10220	10221
	31	32	33	34	35	36	37	38	39	40
Error code	10222	10223	10224	10225	10226	10227	10228	10229	10230	10231
	41	42	43	44	45	46	47	48	49	50
Error code	10232	10233	10234	10235	10236	10237	10238	10239	10240	10241
	51	52	53	54	55	56	57	58	59	60
Error code	10242	10243	10244	10245	10246	10247	10248	10249	10250	10251
	61	62	63	64	65	66	67	68	69	70
Error code	10252	10253	10254	10255	10256	10257	10258	10259	10260	10261
	71	72	73	74	75	76	77	78	79	80
Error code	10262	10263	10264	10265	10266	10267	10268	10269	10270	10271
	81	82	83	84	85	86	87	88	89	90
Error code	10272	10273	10274	10275	10276	10277	10278	10279	10280	10281
	91	92	93	94	95	96	97	98	99	100
Error code	10282	10283	10284	10285	10286	10287	10288	10289	10290	10291
	101	102	103	104	105	106	107	108	109	110
Error code	10292	10293	10294	10295	10296	10297	10298	10299	10300	10301
	111	112	113	114	115	116	117	118	119	120
Error code	10302	10303	10304	10305	10306	10307	10308	10309	10310	10311
	121	122	123	124	125	126	127	128	129	130
Error code	10312	10313	10314	10315	10316	10317	10318	10319	10320	10321
	131	132	133	134	135	136	137	138	139	140
Error code	10322	10323	10324	10325	10326	10327	10328	10329	10330	10331
	141	142	143	144	145	146	147	148	149	150
Error code	10332	10333	10334	10335	10336	10337	10338	10339	10340	10341
	151	152	153	154	155	156	157	158	159	160
Error code	10342	10343	10344	10345	10346	10347	10348	10349	10350	10351
	161	162	163	164	165	166	167	168	169	170
Error code	10352	10353	10354	10355	10356	10357	10358	10359	10360	10361
	171	172	173	174	175	176	177	178	179	180
Error code	10362	10363	10364	10365	10366	10367	10368	10369	10370	10371
	181	182	183	184	185	186	187	188	189	190
Error code	10372	10373	10374	10375	10376	10377	10378	10379	10380	10381
	191	192	193	194	195	196	197	198	199	200
Error code	10382	10383	10384	10385	10386	10387	10388	10389	10390	10391
	201	202	203	204	205	206	207	208	209	210
Error code	10392	10393	10394	10395	10396	10397	10398	10399	10400	10401
	211	212	213	214	215	216	217	218	219	220
Error code	10402	10403	10404	10405	10406	10407	10408	10409	10410	10411
	221	222	223	224	225	226	227	228	229	230
Error code	10412	10413	10414	10415	10416	10417	10418	10419	10420	10421
	231	232	233	234	235	236	237	238	239	240
Error code	10422	10423	10424	10425	10426	10427	10428	10429	10430	10431
	241	242	243	244	245	246	247	248	249	250
Error code	10432	10433	10434	10435	10436	10437	10438	10439	10440	10441
	251	252	253	254	255	256				
Error code	10442	10443	10444	10445	10446	10447				

3.8 Buffer memory details

This section explains the buffer memory details.

POINT
(1) The value stored into the buffer memory is cleared when the PLC is powered off and then on, or the CPU module is reset. Normally, this area need not be read. Read as necessary when maintenance is performed. (2) When a value of 65536 or more is stored in the area consisting of one word, a count is stopped at FFFF$_H$ (65535). (3) If a value of more than two words is stored in the area consisting of two words, a count is stopped at FFFFFFFF$_H$ (4294967295).

3.8.1 Module status area (Address: 0 to 11)

The Web server module LED ON/OFF status, intelligent function module switch setting status, battery status, etc. can be confirmed.
Refer to corresponding sections in Section 3.7.

3.8.2 Network connection status area (Address: 28 to 69)

The connection status of the Web server module to the network can be confirmed.

(1) Router external IP address (Address: 28 to 29)

When the Web server module connects to the Internet after selection of "Notify the global IP address obtained from the router" in the address notification setting, this area stores the global IP address assigned to the router.

(2) Connection error code (Address: 30)

(a) The error code output at the time of network connection processing.
Refer to Section 9.3 for the error code.

(b) The connection error code is stored in binary when Connection error (X19) turns on.

(c) The connection error code is cleared when:
1) The network is connected normally by making reconnection (Network connection status (X4) turns on); or
2) The PLC is powered off and then on or the CPU module is reset.

(3) Number of successful connection (Address: 31), number of failed connection (Address: 32)

This area stores the cumulative numbers of successful/failed network connection.

(4) Number of connection tries by request signal (Y5) (Address: 33)

This area stores the cumulative number of attempted connection to the network by Network connection request (Y5).

(5) Number of connection tries by automatic connection (Address: 34)

This area stores the cumulative number of attempted automatic connection from the Web server module to the network.
Refer to X4 of Section 3.6.2 (1) for the trigger of connection to the network.

(6) Number of reconnection tries (Address: 35)

(a) This area stores the number of reconnection to the network.

(b) When connection is cut off unintentionally due to cable disconnection in the network connection status or line disruption by the Internet service provider, the Web server module makes reconnection to the network automatically only once.

(c) When the number of retries and multiple access points have been set in the dial-up setting, reconnection is performed for the number of retry times multiplied by the number of multiple access points.

(7) Number of times of connection retry occurrence (Address: 36)

This area stores the number of connection tries (including initial time) during network connection the number 05 multiplied by the number of access points.

(8) Number of disconnection (Address: 37)

This area stores the cumulative number of disconnection from the network.
Refer to X4 of Section 3.6.2 (1) for the trigger of disconnection from the network.

(9) Number of disconnection by request signal (Y7) (Address: 38)

This area stores the cumulative number of disconnection from the network by Network disconnection request (Y7).

(10) Number of automatic disconnection (Address: 39)

This area stores the cumulative number of automatic disconnection from the network.
Refer to X4 of Section 3.6.2 (1) for the trigger of disconnection from the network.

(11) Number of line lost times (Address: 40)

This area stores the cumulative number of unintentional disconnection from the network due to cable disconnection in a network connection status or line disruption from the Internet service provider.

(12) Total connection time (Address: 41 to 42)

This area stores the total time of connection to the network from the start-up time of the Web server module. (Unit: Minute)

(13) LAN connection time (Address: 43 to 44), Modem connection time (Address: 45 to 46), ADSL connection time (Address: 49 to 50)

This area stores the time of the network connection for each connection method. (Unit: Minute)

(14) Current connection time (Address: 53 to 54)

This area stores the time of current connection to the network. (Unit: Minute)

(15) Network setting status of Web server module(Address: 55 to 68)

This area stores the setting status of the network where the Web server module is currently connected.

(a) IP address (Address: 55 to 56)

(b) Subnet mask (Address: 57 to 58)

(c) Default gateway (Address: 59 to 60)

(d) DNS server address 1 (Address: 61 to 62)

(e) DNS server address 2 (Address: 63 to 64)

(f) HTTP port number

(g) Connection method (Address: 66)
This area stores the method of connection to the network.
0: LAN connection
1: Modem connection
3: ADSL connection

(h) Access point (Address: 67)
This area stores the access point of the Internet service provider as the access point setting number on the "Dial-up setting" screen.
1 to 3: Access point setting number

(i) FTP port number (Address: 68)

(16) Number of disconnections from user screen (number of disconnections by line disconnection part) (Address: 69)

This area stores the cumulative number of disconnections from the network in response to a line disconnection request from the user screen.

3.8.3 System setting status area (Address: 70 to 86)

The system setting status can be confirmed.
Refer to Section 4.6.3 for system setting.

3.8.4 Dial-up setting status area (Address: 90 to 134)

The dial-up setting status can be confirmed.
Refer to Section 4.6.4 for dial-up setting.

3.8.5 Current error area (Address: 140 to 145)

The latest error code that is currently occurring can be confirmed.

(1) Error code (Address: 140)

This area stores the error code that indicates the error status.
Refer to Section 9.3 for the error code.

(2) Time (Address: 142 to 145)

Stores the error occurrence time in BCD code.

	b15 to b8	b7 to b0
Address: 142	Month (01H to 12H)	Year (00H to 99H, last 2 digits)
143	Hour (00H to 23H)	Day (01H to 31H)
144	Second (00H to 59H)	Minute (00H to 59H)
145	Year (00H to 99H, first 2 digits)	Day of the week (0H to 6H)

POINT

(1) The information of the current error area can be confirmed on the following diagnostic screen.
   (a) "Error data" of self-diagnostics monitor (Refer to Section 6.2.6)
   (b) "Present Error" in system monitor of GX Developer (Refer to Section 9.2.2)

(2) The current error area can be cleared in any of the following methods.
   (a) Execute Error clear in self-diagnostics monitor (Refer to Section 6.2.6).
   (b) Turn on the error clear request (Y10).
   (c) Switch the power OFF and then ON or reset the CPU module.

3.8.6 Error log area (Address: 150 to 247)

The history of errors that occurred in the Web server module can be confirmed.

(1) Number of times of error occurrence (Address: 150)

(a) This area stores the cumulative number of times stored in the error log area.

(b) An error code is stored when Other error (X1C) turns on.

(2) Error log write pointer (Address: 151)

(a) This area stores the error log No. with which the latest error has been stored. (*)

0 : No error. (No error stored)

1 or more : Error log No. of the latest error stored

* The pointer value of "16" indicates that the latest error has been stored into the error log 16 area.

(b) If 17 or more errors occur, the error is stored into the error log areas, starting from the error log 1 area again.

(3) Error log 1 to 16 (Address: 152 to 247)

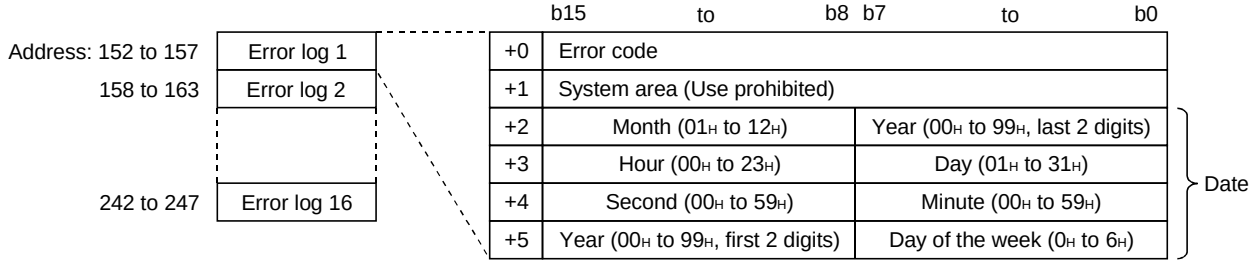
This area stores the history of errors that occurred in the Web server module.
The error log area is composed of 16 portions of the same data arrangement.

(a) Error code

This area stores the error code that indicates the error status.
Refer to Section 9.3 for the error code.

(b) Time

This area stores the error occurrence time in BCD code.



POINT

(1) The information of the error log area can be confirmed on the following diagnostic screen.
   (a) "Error history" of self-diagnostics monitor (Refer to Section 6.2.6)
   (b) "Error Display" in system monitor of GX Developer (Refer to Section 9.2.2)
(2) The error log area can be cleared in either of the following methods.
   (a) Execute History clear in self-diagnostics monitor (Refer to Section 6.2.6).
   (b) Switch the power OFF and then ON or reset the CPU module.

3.8.7 Login history area (Address: 250 to 380)

The history of login to the Web server module via the Web or FTP can be confirmed.

(1) Number of login times (Address: 250 to 251)

This area stores the cumulative number of login times to the Web server module using Web or FTP.

(2) Login history write pointer (Address: 252)

(a) This area stores the login history No. with which the latest login history has been stored. (*)

0 : No login history. (No login history stored)

1 or more : Login history No. of the latest login history stored

* The pointer value of "16" indicates that the latest login history has been stored into the login history 16 area.

(b) If 17 or more errors occur, the login history is stored into the login history areas, starting from the login history 1 area again.

(3) Login history 1 to 16 (Address: 253 to 380)

This area stores the history of login to the Web server module via the Web or FTP.

The login history area is composed of 16 portions of the same data arrangement.

(a) User number

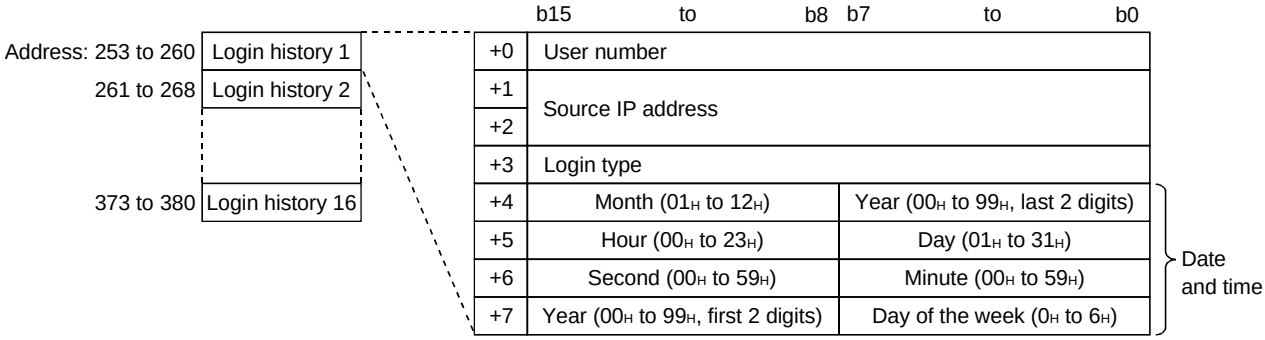
1) This area stores the user number for login.

2) The user number is the number set in the account setting.

(b) Source IP address
This area stores the IP address of the access source for login.

(c) Login type
This area stores whether Web or FTP has been used for login.
1: Web login
2: FTP login

(d) Date and Time
This area stores the date and time of the login in BCD code.



3.8.8 IP filter area (Address: 382 to 383)

The number of times when the IP packet is blocked by the IP filter can be confirmed.

(1) Number of times when IP packet is blocked (Address: 382 to 383)

This area stores the cumulative number of times when the IP packet is blocked by the Web server module according to the IP filter setting.

3.8.9 Collection monitor cycle area (Address: 800 to 803)

The collection monitor cycle in which the Web server module is operating actually can be confirmed.

(1) Current cycle (Address: 800 to 801)

This area stores the current time interval of tag collection by the Web server module. (Unit: Second)

(2) Maximum cycle (Address: 802 to 803)

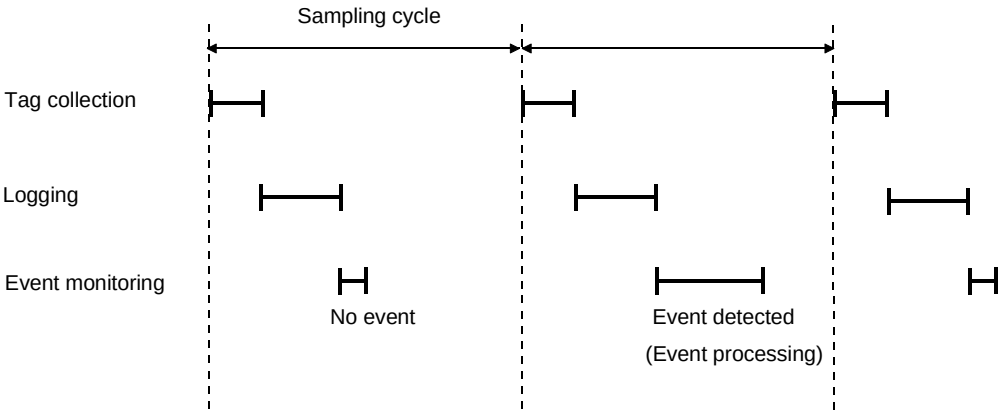
This area stores the maximum time interval of tag collection in the past. (Unit: Second)

Remarks

(a) Collection monitor cycle

The Web server module performs tag collection, logging and event monitoring in this order.

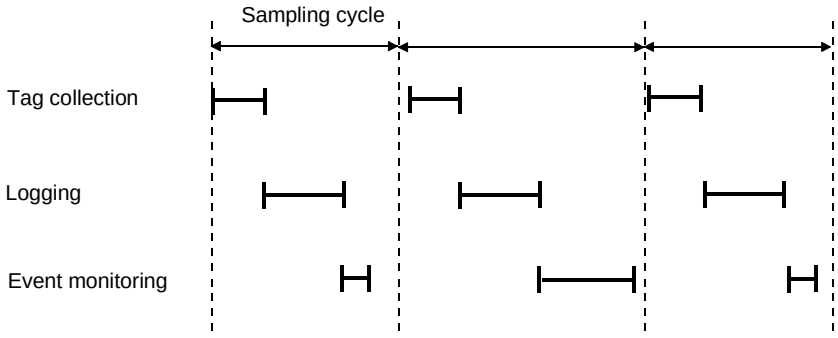
Example) When the same time value is set to the Tag collection interval, logging interval and event interval:



(b) Influence of tag collection, logging and event monitor on execution intervals

In the following cases, the processing of tag collection, logging or event monitor will delay.

1) When the maximum cycle time is longer than the time set to tag collection, logging or event monitor
2) When the tag collection, logging or event monitoring are overlapped with the execution of the dedicated instruction or the FTP/Web browser operation.



(Example) When logging timing is delayed:

TIME	device A	device B
11/14/2002 14:20:15	100	123
11/14/2002 14:20:20	97	125
11/14/2002 14:20:25	101	125
11/14/2002 14:20:30	100	123

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3.8.10 Tag status area (Address: 1000 to 1075)

The status related to the tag function can be confirmed.
Refer to Section 6.3 for the tag function.

(1) Tag setting data (Address: 1000 to 1003)

(a) This area stores information on whether tag settings have been made or not.

(b) The bit corresponding to the preset tag setting No. turns on.
0: Not set
1: Set

Address:		b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
	1000	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	1001	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
	1002	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
	1003	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49

(2) Tag collection data (Address: 1004 to 1007)

(a) This area stores the tag collection results.

(b) The bit corresponding to the executed tag setting No. turns on.
0: Not collected
1: Collected

Address:		b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
	1004	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	1005	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
	1006	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
	1007	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49

(c) Tag collection is executed at the following timings.
1) At start-up of the Web server module or during the collection interval time in the case that "Execute (at high speed)" has been set in the collection specification of the tag setting
2) When the dedicated instruction TAG is executed
3) When logging is performed in the case that "Update before logging" has been set in the collection specification of the tag setting

(3) Tag collection error data (Address: 1008 to 1011)

(a) This area stores the tag collection error data.

(b) The bit corresponding to the tag setting No. of a tag collection error turns on.
0: No tag collection error
1: Tag collection error detected

Address:		b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
	1008	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	1009	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
	1010	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
	1011	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49

(c) The following is observed when a tag collection error occurs.
(Example) When an error occurs in tag collection of the tag setting No. 16
- Tag collection error (X11) turns on
- Tag collection error data area (address: 1008 (bit 15)) of the buffer memory turns on.
- The error code is stored into the tag collection 16 error code area (address: 1027) of the buffer memory.

(4) Tag collection 1 to 64 error code (Address: 1012 to 1075)

The error code that indicates the error status is stored into the corresponding tag setting No. area.
Refer to Section 9.3 for the error code.

3.8.11 Logging status area (Address: 2000 to 2267)

The status related to the logging function can be confirmed.
Refer to Section 6.4 for the logging function.

(1) Logging setting data (Address: 2000 to 2003)

(a) This area stores information on whether logging setting has been made or not.

(b) The bit corresponding to the preset logging setting No. turns on.
0: Not set
1: Set

		b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
Address:	2000	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	2001	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
	2002	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
	2003	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49

(2) Logging execute data (Address: 2004 to 2007)

(a) This area stores the logging execution results.

(b) The bit corresponding to the executed logging setting No. turns on.
0: Logging not executed
1: Logging executed

		b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
Address:	2004	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	2005	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
	2006	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
	2007	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49

(c) Logging is executed at the following timings.
1) At the specified time or specified time interval when "Schedule setting" has been set in the logging setting
2) When the dedicated instruction LOG is executed

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(3) Logging error data (Address: 2008 to 2011)

(a) This area stores the logging error data.

(b) The bit corresponding to the logging setting No. of a logging error turns on.
0: No logging error
1: Logging error detected

Address:		b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
	2008	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	2009	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
	2010	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
	2011	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49

(c) The following is observed when a logging error occurs.
(Example) When an error occurs at execution of the logging setting No. 16

- Logging error (X12) turns on
- Logging error data area (address: 2008 (bit 15)) of the buffer memory turns on.
- The error code is stored into the logging 16 error code area (address: 2072) of the buffer memory.

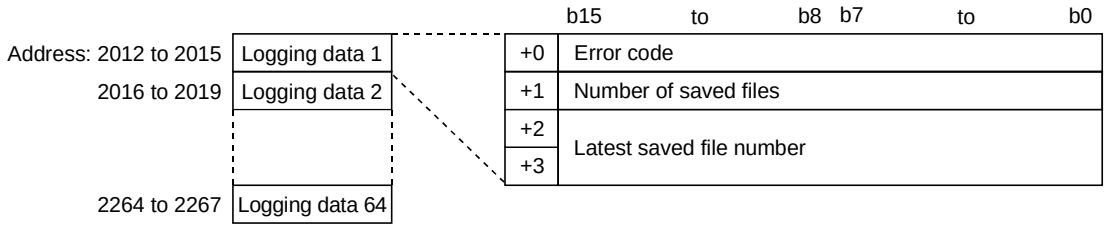
(4) Logging data 1 to 64 (Address: 2012 to 2267)

This area stores information on the errors that occurred in the logging function.
The logging data area is composed of 64 portions of the same data arrangement.

(a) Error code
The error code that indicates the error status is stored into the corresponding logging setting No. area where a logging error occurred.
Refer to Section 9.3 for the error code.

(b) Number of saved files
This area stores the number of currently saved files.

(c) Latest saved file number
This area stores the latest saved file number.



3.8.12 CPU event monitor status area 1 (Address: 3300 to 3375)

The status related to the CPU event monitor function can be confirmed.
Refer to Section 6.5 for the CPU event monitor function.

(1) CPU event setting data (Address: 3300 to 3303)

(a) This area stores information on whether "CPU event setting" in the event setting has been made or not.

(b) The bit corresponding to the preset CPU event setting No. turns on.
0: Not set
1: Set

	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
Address: 3300	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
3301	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
3302	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
3303	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49

(2) CPU event occurrence data (Address: 3304 to 3307)

(a) This area stores the CPU event occurrence results.

(b) The bit corresponding to the CPU event setting No. of a CPU event turns on.
0: Event not occurred
1: Event occurred

	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
Address: 3304	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
3305	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
3306	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
3307	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49

(c) A CPU event occurs when the monitoring condition set in "CPU event setting" of the event setting is satisfied.

(3) CPU event monitor error data (Address: 3308 to 3311)

(a) This area stores the CPU event monitor error data.

(b) The bit corresponding to the CPU event setting No. of a CPU event monitor error turns on.
0: No CPU event monitor error occurred
1: CPU event monitor error occurred

	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
Address: 3308	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
3309	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
3310	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
3311	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49

(c) The following is observed when a CPU event monitor error occurs.
(Example) When an error occurs in CPU event monitor of the CPU event setting No. 16
- CPU event monitor error (X13) turns on
- CPU event monitor error data area (address: 3308 (bit 15)) of the buffer memory turns on.
- The error code is stored into the CPU event monitor 16 error code area (address: 3329) of the buffer memory.

(4) CPU event monitor 1 to 64 error code (Address: 3312 to 3375)

The error code that indicates the error status is stored into the corresponding CPU event setting No. area.
Refer to Section 9.3 for the error code.

3.8.13 CPU event monitor status area 2 (Address: 3000 to 3018)

The status related to the CPU event monitor function can be confirmed.
Refer to Section 6.5 for the CPU event monitor function.

POINT

When using the product whose first 5 digits of serial No. are 05112 or later, use the CPU event monitor status area 1 (address: 3300 to 3375). (Refer to Section 3.8.12)
When this area has been used previously, it can be used as-is.

(1) CPU event setting data (Address: 3000)

(a) This area stores information on whether "CPU event setting" in the event setting has been made or not.

(b) The bit corresponding to the preset CPU event setting No. turns on.
0: Not set
1: Set

		b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
Address:	3000	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

(2) CPU event occurrence data (Address: 3001)

(a) This area stores the CPU event occurrence results.

(b) The bit corresponding to the CPU event setting No. of a CPU event turns on.
0: Event not occurred
1: Event occurred

		b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
Address:	3001	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

(c) A CPU event occurs when the monitoring condition set in "CPU event setting" of the event setting is satisfied.

(3) CPU event monitor error data (Address: 3002)

(a) This area stores the CPU event monitor error data.

(b) The bit corresponding to the CPU event setting No. of a CPU event monitor error turns on.
0: No CPU event monitor error occurred
1: CPU event monitor error occurred

		b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
Address:	3002	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

(c) The following is observed when a CPU event monitor error occurs.
(Example) When an error occurs in CPU event monitor of the CPU event setting No. 16
- CPU event monitor error (X13) turns on
- CPU event monitor error data area (address: 3002 (bit 15)) of the buffer memory turns on.
- The error code is stored into the CPU event monitor 16 error code area (address: 3018) of the buffer memory.

(4) CPU event monitor 1 to 16 error code (Address: 3003 to 3018)

The error code that indicates the error status is stored into the corresponding CPU event setting No. area.
Refer to Section 9.3 for the error code.

3.8.14 Tag event monitor status area 1 (Address: 10000 to 10447)

The status related to the tag event monitor function can be confirmed.
Refer to Section 6.5 for the tag event monitor function.

(1) Tag event setting data (Address: 10000 to 10015)

(a) This area stores information on whether "Tag event setting" in the event setting has been made or not.

(b) The bit corresponding to the preset tag event setting No. turns on.
0: Not set
1: Set

		b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
Address:	10000	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	10001	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
	10002	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
	10003	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
	10004	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65
	10005	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
	10006	112	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97
	10007	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113
	10008	144	143	142	141	140	139	138	137	136	135	134	133	132	131	130	129
	10009	160	159	158	157	156	155	154	153	152	151	150	149	148	147	146	145
	10010	176	175	174	173	172	171	170	169	168	167	166	165	164	163	162	161
	10011	192	191	190	189	188	187	186	185	184	183	182	181	180	179	178	177
	10012	208	207	206	205	204	203	202	201	200	199	198	197	196	195	194	193
	10013	224	223	222	221	220	219	218	217	216	215	214	213	212	211	210	209
	10014	240	239	238	237	236	235	234	233	232	231	230	229	228	227	226	225
	10015	256	255	254	253	252	251	250	249	248	247	246	245	244	243	242	241

(2) Tag event occurrence data (Address: 10064 to 10079)

(a) This area stores the tag event occurrence results.

(b) The bit corresponding to the tag event setting No. of a tag event turns on.
0: Event not occurred
1: Event occurred

Address:	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
10064	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
10065	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
10066	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
10067	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
10068	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65
10069	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
10070	112	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97
10071	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113
10072	144	143	142	141	140	139	138	137	136	135	134	133	132	131	130	129
10073	160	159	158	157	156	155	154	153	152	151	150	149	148	147	146	145
10074	176	175	174	173	172	171	170	169	168	167	166	165	164	163	162	161
10075	192	191	190	189	188	187	186	185	184	183	182	181	180	179	178	177
10076	208	207	206	205	204	203	202	201	200	199	198	197	196	195	194	193
10077	224	223	222	221	220	219	218	217	216	215	214	213	212	211	210	209
10078	240	239	238	237	236	235	234	233	232	231	230	229	228	227	226	225
10079	256	255	254	253	252	251	250	249	248	247	246	245	244	243	242	241

(c) A tag event occurs when the monitoring condition set in "Tag event setting" of the event setting is satisfied.

(3) Tag event monitor error data (Address: 10128 to 10143)

(a) This area stores the tag event monitor error data.

(b) The bit corresponding to the tag event setting No. of a tag event monitor error turns on.
0: No tag event monitor error occurred
1: Tag event monitor error occurred

Address:	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
10128	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
10129	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
10130	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
10131	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
10132	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65
10133	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
10134	112	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97
10135	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113
10136	144	143	142	141	140	139	138	137	136	135	134	133	132	131	130	129
10137	160	159	158	157	156	155	154	153	152	151	150	149	148	147	146	145
10138	176	175	174	173	172	171	170	169	168	167	166	165	164	163	162	161
10139	192	191	190	189	188	187	186	185	184	183	182	181	180	179	178	177
10140	208	207	206	205	204	203	202	201	200	199	198	197	196	195	194	193
10141	224	223	222	221	220	219	218	217	216	215	214	213	212	211	210	209
10142	240	239	238	237	236	235	234	233	232	231	230	229	228	227	226	225
10143	256	255	254	253	252	251	250	249	248	247	246	245	244	243	242	241

(c) The following is observed when a tag event monitor error occurs.
(Example) When an error occurs in tag event monitor of the tag event setting No. 16
- Tag event monitor error (X14) turns on
- Tag event monitor error data area (address: 10128 (bit 15)) of the buffer memory turns on.
- The error code is stored into the tag event monitor 16 error code area (address: 10207) of the buffer memory.

(4) Tag event monitor 1 to 256 error code (Address: 10192 to 10447)
The error code that indicates the error status is stored into the corresponding tag event setting No. area.
Refer to Section 9.3 for the error code.

3.8.15 Tag event monitor status area 2 (Address: 3100 to 3118)

The status related to the tag event monitor function can be confirmed.
Refer to Section 6.5 for the tag event monitor function.

POINT
When using the product whose first 5 digits of serial No. are 05112 or later, use the tag event monitor status area 1 (address: 10000 to 10447). (Refer to Section 3.8.14) When this area has been used previously, it can be used as-is.

(1) Tag event setting data (Address: 3100)
(a) This area stores information on whether "Tag event setting" in the event setting has been made or not.

(b) The bit corresponding to the preset tag event setting No. turns on.
0: Not set
1: Set

		b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
Address:	3100	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

(2) Tag event occurrence data (Address: 3101)
(a) This area stores the tag event occurrence results.

(b) The bit corresponding to the tag event setting No. of a tag event turns on.
0: Event not occurred
1: Event occurred

		b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
Address:	3101	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

(c) A tag event occurs when the monitoring condition set in "Tag event setting" of the event setting is satisfied.

(3) Tag event monitor error data (Address: 3102)

(a) This area stores the tag event monitor error data.

(b) The bit corresponding to the tag event setting No. of a tag event monitor error turns on.
0: No tag event monitor error occurred
1: Tag event monitor error occurred

	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
Address: 3102	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

(c) The following is observed when a tag event monitor error occurs.
(Example) When an error occurs in tag event monitor of the tag event setting No. 16
- Tag event monitor error (X14) turns on.
- Tag event monitor error data area (address: 3102 (bit 15)) of the buffer memory turns on.
- The error code is stored into the tag event monitor 16 error code area (address: 3118) of the buffer memory.

(4) Tag event monitor 1 to 16 error code (Address: 3103 to 3118)
The error code that indicates the error status is stored into the corresponding tag event setting No. area.
Refer to Section 9.3 for the error code.

3.8.16 Time/Interval monitor status area (Address: 3200 to 3217)

The status related to the time event monitor function can be confirmed.
Refer to Section 6.5 for the time event monitor function.

(1) Time event setting data (Address: 3200)

(a) This area stores information on whether "Time/Interval event setting" in the event setting has been made or not.

(b) The bit corresponding to the preset time/interval event setting No. turns on.
0: Not set
1: Set

	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
Address: 3200	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

(2) Time event monitor error data (Address: 3201)

(a) This area stores the time event monitor error data.

(b) The bit corresponding to the time/interval event setting No. of a time event monitor error turns on.
0: No time event monitor error occurred
1: Time event monitor error occurred

	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
Address: 3201	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

(c) The following is observed when a time event monitor error occurs.
(Example) When an error occurs in time event monitor of the time/interval event setting No. 16
- Time event monitor error (X15) turns on.
- Time event monitor error data area (address: 3201 (bit 15)) of the buffer memory turns on.
- The error code is stored into the time event monitor 16 error code area (address: 3217) of the buffer memory.

(3) Time event monitor 1 to 16 error code (Address: 3202 to 3217)

The error code that indicates the error status is stored into the corresponding time/interval event setting No. area.
Refer to Section 9.3 for the error code.

3.8.17 Access target CPU setting status area (Address: 4000 to 4071)

The setting status of the access target CPU setting can be confirmed.
Refer to Section 4.6.7 for the access target CPU setting.

(1) Access target CPU setting data (Address: 4000 to 4003)

(a) This area stores information on whether the access target CPU setting has been made or not.

(b) The bit corresponding to the preset access target CPU setting No. turns on.
0: Not set
1: Set

		b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
Address:	4000	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	4001	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
	4002	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
	4003	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49

(2) Access target CPU error data (Address: 4004 to 4007)

(a) This area stores the access target CPU error data.

(b) The bit corresponding to the an access target CPU setting No. of an access target CPU error turns on.
0: No access target CPU error occurred
1: Access target CPU error occurred

		b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
Address:	4004	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	4005	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
	4006	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
	4007	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49

(c) The following is observed when an access target CPU error occurs.
(Example) When an error occurs in the access target CPU of the access target CPU setting No. 16
- Access target CPU error (X16) turns on.
- Access target CPU error data area (address: 4004 (bit 15)) of the buffer memory turns on.
- The error code is stored into the access target CPU 16 error code area (address: 4023) of the buffer memory.

(3) Access target CPU 1 to 64 error code (Address: 4008 to 4071)

The error code that indicates the error status is stored into the corresponding access target CPU setting No. area.
Refer to Section 9.3 for the error code.

3.8.18 E-mail transmission status area (Address: 5000 to 5984)

The status related to the e-mail function can be confirmed.
Refer to Section 6.6 for the e-mail function.

(1) WMSEND instruction execution count storage area

The number of times when the WMSEND instruction was executed can be confirmed.
The transmission log at normal completion can be confirmed in (4) in this section.
The error log at abnormal completion can be confirmed in (3) in this section.

(a) Number of times when WMSEND instruction was normally completed (Address: 5000)
This area stores the cumulative number of times when WMSEND instruction was normally completed.

(b) Number of times when WMSEND instruction failed (Address: 5001)
This area stores the cumulative number of times when WMSEND instruction failed.

(2) E-mail transmission count storage area

The number of times when the Web server module sent e-mail can be confirmed.
The transmission log at normal completion can be confirmed in (4) in this section.
The error log at abnormal completion can be confirmed in (3) in this section.

(a) Number of normally completed e-mail transmission (Address: 5002)
This area stores the cumulative number of times when the Web server module sent e-mail to the mail server.

(b) Number of sent attached files (Address: 5003)
This area stores the cumulative number of times when the Web server module sent e-mail with attached file.

(c) Number of undelivered e-mails (Address: 5004)
This area stores the cumulative number of communication errors that were returned to the Web server module as a result of requesting the mail server to send e-mail.

(3) Error log storage area for abnormal completion

The error log of failed e-mail transmission can be confirmed.

(a) Number of writes for error log (Address: 5005)

1) This area stores the cumulative number of errors that were stored into the error log area.
2) The error code is stored when e-mail transmission error (X17) turns on.

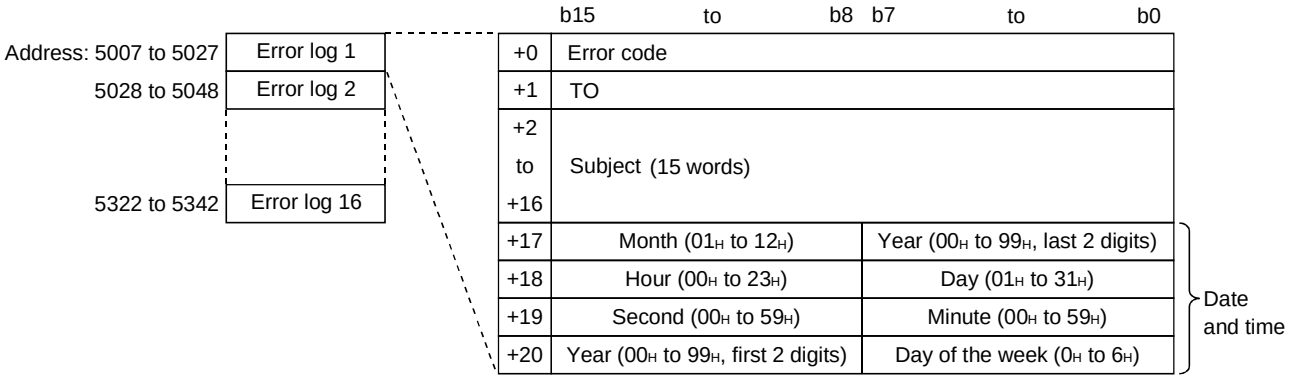
(b) Error log write pointer (Address: 5006)

1) This area stores the error log No. of the latest error log. (*)
   0 : No error. (No error stored)
   1 or more : Error log No. of the latest error stored
   * The pointer value of "16" indicates that the latest error has been stored into the error log 16 area.
2) If 17 or more errors occur, excess errors are stored into the error log areas, starting from the error log 1 area again.

(c) Error log 1 to 16 (Address: 5007 to 5342)

This area stores the error logs of failed e-mail transmission.
The error log area is composed of 16 portions of the same data arrangement.

1) Error code
   This area stores the error code that indicates the error status.
   Refer to Section 9.3 for the error code.
2) To
   - This area stores the destination e-mail address No. of the undelivered e-mail.
   - The destination e-mail address No. is set in "E-mail address (TO:) setting" of the E-mail setting.
3) Subject
   This area stores the first 15 words of the e-mail subject.
4) Date and Time
   This area stores the date and time of e-mail transmission in BCD code.



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(4) Transmission log storage area for normal completion

The transmission log of normally completed e-mail transmission can be confirmed.

(a) Number of writes for transmission log (Address: 5343)

1) This area stores the cumulative number of registrations to the transmission log area.
2) This area stores the transmission log when the Web server module sent e-mail to the mail server normally.

(b) Transmission log write pointer (Address: 5344)

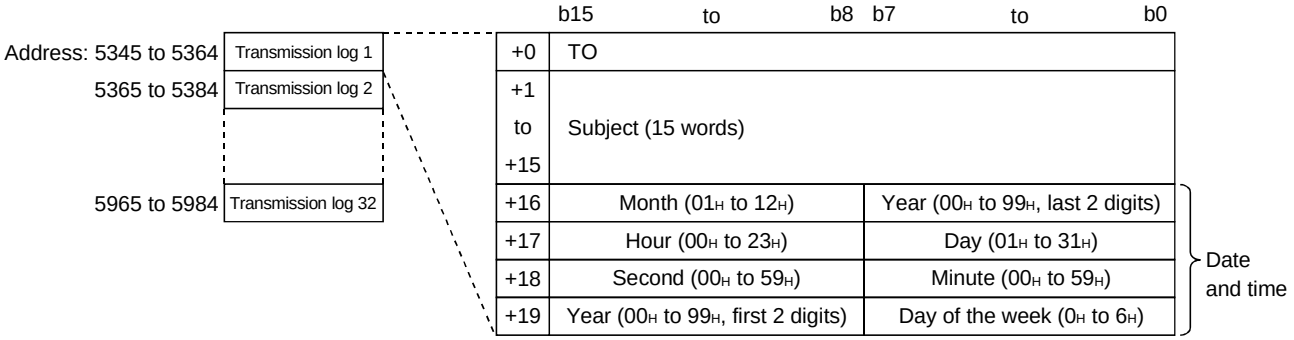
1) This area stores the transmission log No. where the latest transmission log is registered. (*)
   0 : No transmission. (No transmission log registered)
   1 or more : Transmission log No. where the latest transmission log is registered
   * The pointer value of "16" indicates that the latest transmission log has been registered in the transmission log 16 area.
2) If 33 or more transmission logs occur, excess transmission logs are registered to the areas, starting from the transmission log 1 area again.

(c) Transmission log 1 to 32 (Address: 5345 to 5984)

This area stores the transmission logs at normal completion of e-mail transmission.

The transmission log area is composed of 32 portions of the same data arrangement.

1) To
   - This area stores the destination mail address No. of the normally completed e-mail.
   - The destination mail address No. is set in "E-mail address (TO:) setting" of the E-mail setting.
2) Subject
   This area stores the first 15 words of the e-mail subject.
3) Date and Time
   This area stores the date and time of e-mail transmission in BCD code.



3.8.19 FTP server status area (Address: 6000 to 6001)

The status related to the FTP server function can be confirmed.
Refer to Section 6.7.1 for the FTP server function.

(1) Number of successful login (Address: 6000)
This area stores the cumulative number of successful login to the FTP server.

(2) Number of failed login (Address: 6001)
This area stores the cumulative number of failed login to the FTP server.

3.8.20 FTP client status (PUT) area (Address: 6002 to 6553)

The status related to the FTP client function (PUT) can be confirmed.
The FTP client function (PUT) writes the file of the Web server module to the FTP server.
Refer to Section 6.7.2 for the FTP client function (PUT).

(1) FTPPUT instruction execution count storage area
The number of times when the FTPPUT instruction was executed can be confirmed.
The transfer log at normal completion can be confirmed in (4) in this section.
The error log at abnormal completion can be confirmed in (3) in this section.

(a) Number of times when FTPPUT instruction was normally completed (Address: 6002)
This area stores the cumulative number of times when FTPPUT instruction was normally completed.

(b) Number of times when FTPPUT instruction failed (Address: 6003)
This area stores the cumulative number of times when FTPPUT instruction failed.

(2) File transfer count storage area
The number of times when the Web server module transferred files can be confirmed.
The transfer log at normal completion can be confirmed in (4) in this section.
The error log at abnormal completion can be confirmed in (3) in this section.

(a) Number of normally completed FTP transfer (PUT) (Address: 6004)
This area stores the cumulative number of times when the Web server module transferred (PUT) a file to the FTP server.

(b) Number of failed FTP transfer (PUT) (Address: 6005)
This area stores the cumulative number of communication errors that were returned to the Web server module as a result of requesting the FTP server to transfer (PUT) a file.

(3) Error log storage area for abnormal completion

The error log of failed file transfer can be confirmed.

(a) Number of writes for error log (Address: 6006)

1) This area stores the cumulative number of errors stored in the error log area.

2) The error code is stored when FTP transfer error (X18) turns on.

(b) Error log write pointer (Address: 6007)

1) This area stores the error log No. of the latest error log. (*)

0 : No error. (No error stored)

1 or more : Error log No. of the latest error stored

* The pointer value of "16" indicates that the latest error has been stored into the error log 16 area.

2) If 17 or more errors occur, excess errors are stored into the error log areas, starting from the error log 1 area again.

(c) Error log 1 to 16 (Address: 6008 to 6199)

This area stores the error logs of failed file transfer.

The error log area is composed of 16 portions of the same data arrangement.

1) Error code

This area stores the error code that indicates the error status.

Refer to Section 9.3 for the error code.

2) Destination

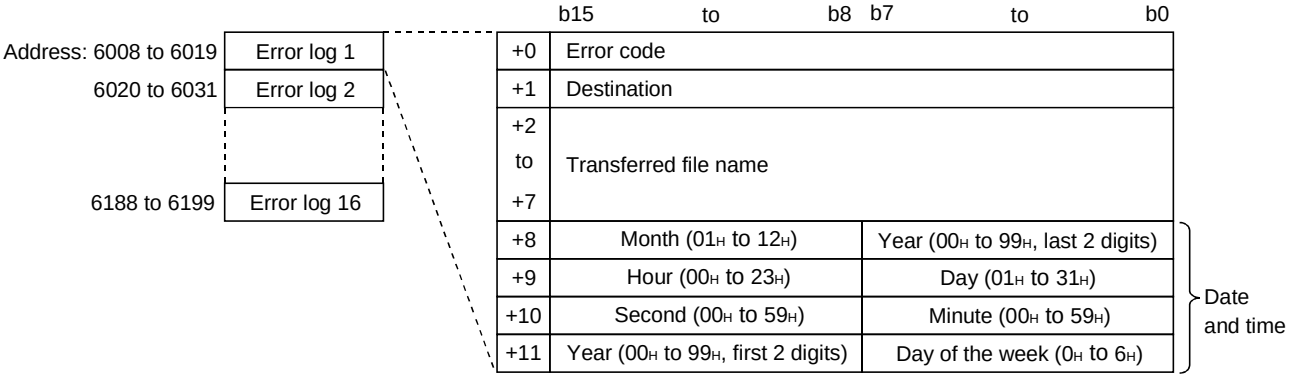
- This area stores the destination FTP server No. when a communication error occurs.
- The destination FTP server No. is set in the FTP server setting.

3) Transferred file name

This area stores the transferred file name in ASCII code.

4) Date and Time

This area stores the date and time of file transfer in BCD code.



(4) Transfer log storage area for normal completion

The transfer log of normally completed file transfer can be confirmed.

(a) Number of writes for transfer log (Address: 6200)

1) This area stores the cumulative number of registrations to the transfer log area.

2) This area stores the transfer log when the Web server module transferred (PUT) a file to the FTP server normally.

(b) Transfer log write pointer (Address: 6201)

1) This area stores the transfer log No. where the latest transfer log is registered. (*)

0 : No transfer. (No transfer log registered)

1 or more : Transfer log No. where the latest transfer log is registered

* The pointer value of "16" indicates that the latest transfer log is registered in the transfer log 16 area.

2) If 33 or more errors occur, excess transfer logs are registered to the areas, starting from the transmission log 1 area again.

(c) Transfer log 1 to 32 (Address: 6202 to 6553)

This area stores the transfer logs of normally completed file transfer.
The transfer log area is composed of 32 portions of the same data arrangement.

1) Destination

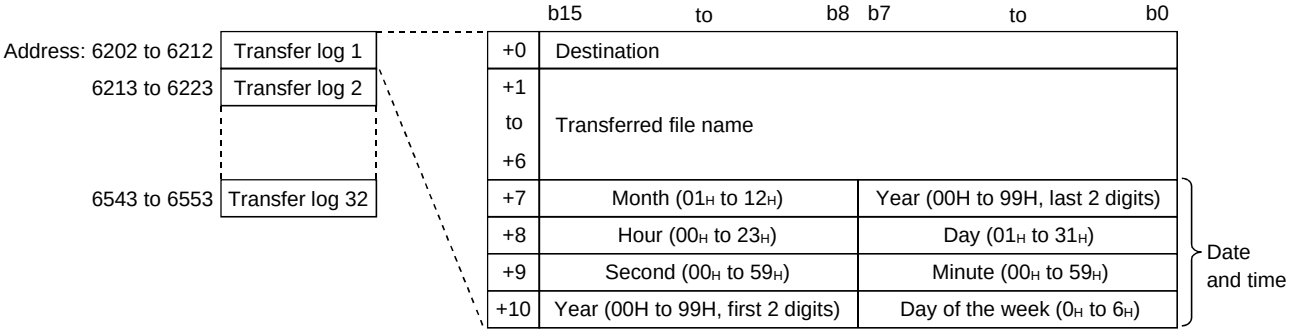
- This area stores the destination FTP server No. of the normally completed FTP transfer (PUT).
- The destination FTP server No. is set in the FTP server setting.

2) Transferred file name

This area stores the transferred file name in ASCII code.

3) Date and Time

This area stores the date and time of file transfer in BCD code.



3.8.21 FTP client status (GET) area (Address: 8002 to 8553)

The status related to the FTP client function (GET) can be confirmed.
The FTP client function (GET) reads the file of the FTP server to the Web server module.
Refer to Section 6.7.2 for the FTP client function (GET).

(1) FTPGET instruction execution count storage area

The number of times when the FTPGET instruction was executed can be confirmed.
The transfer log at normal completion can be confirmed in (4) in this section.
The error log at abnormal completion can be confirmed in (3) in this section.

(a) Number of times when FTPGET instruction was normally completed (Address: 8002)
This area stores the cumulative number of times when the FTPGET instruction was normally completed.

(b) Number of times when FTPGET instruction failed (Address: 8003)
This area stores the cumulative number of times when the FTPGET instruction failed.

(2) File transfer count storage area

The number of times when the Web server module transferred files can be confirmed.
The transfer log at normal completion can be confirmed in (4) in this section.
The error log at abnormal completion can be confirmed in (3) in this section.

(a) Number of normally completed FTP transfer (GET) (Address: 8004)
This area stores the cumulative number of times when the Web server module transferred (GET) a file from the FTP server.

(b) Number of failed FTP transfer (GET) (Address: 8005)
This area stores the cumulative number of communication errors that were returned to the Web server module as a result of requesting the FTP server to transfer (GET) a file.

(3) Error log storage area for abnormal completion

The error log of failed file transfer can be confirmed.

(a) Number of writes for error log (Address: 8006)
1) This area stores the cumulative number of errors stored in the error log area.
2) An error code is stored when FTP transfer error (X18) turns on.

(b) Error log write pointer (Address: 8007)
1) This area stores the error log No. of the latest error log. (*)
0 : No error. (No error stored)
1 or more : Error log No. of the latest error stored
* The pointer value of "16" indicates that the latest error has been stored into the error log 16 area.
2) If 17 or more errors occur, excess errors are registered to the error log areas, starting from the error log 1 area again.

(c) Error log 1 to 16 (Address: 8008 to 8199)

This area stores the error logs of failed file transfer.

The error log area is composed of 16 portions of the same data arrangement.

1) Error code

This area stores the error code that indicates the error status.

Refer to Section 9.3 for the error code.

2) Source

This area stores the source FTP server No. when a communication error occurs.

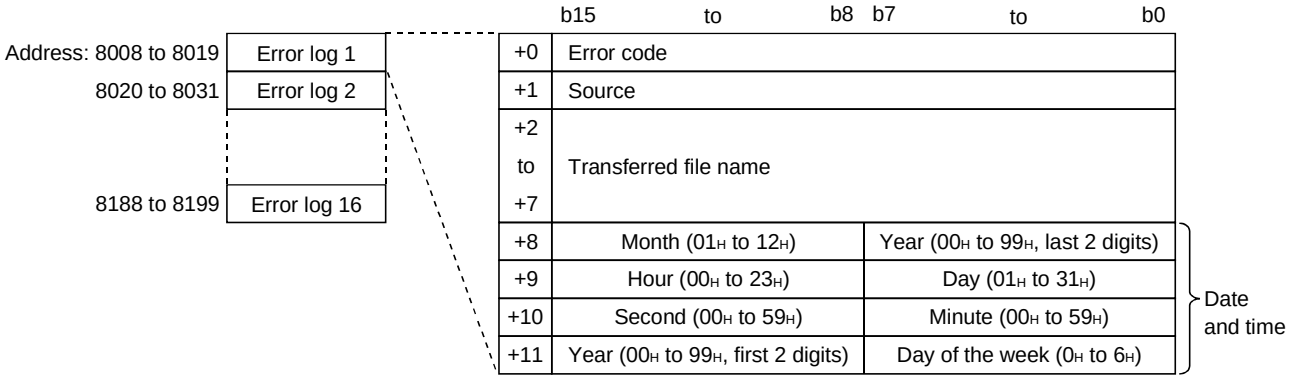
The source FTP server No. is set in the FTP server setting.

3) Transferred file name

This area stores the transferred file name in ASCII code.

4) Date and Time

This area stores the date and time of file transfer in BCD code.



(4) Transfer log storage area for normal completion

The transfer log of normally completed file transfer can be confirmed.

(a) Number of writes for transfer log (Address: 8200)

1) This area stores the cumulative number of registrations to the transfer log area.

2) This area stores the transfer log when the Web server module transferred (GET) a file from the FTP server normally.

(b) Transfer log write pointer (Address: 8201)

1) This area stores the transfer log No. where the latest transfer log is registered. (*)

0 : No transfer. (No transfer log registered)

1 or more : Transfer log No. where the latest transfer log is registered

* The pointer value of 16" indicates that the latest transfer log is registered in the transfer log 16 area.

2) If 33 or more errors occur, excess transfer logs are registered to the areas, starting from the transmission log 1 area again.

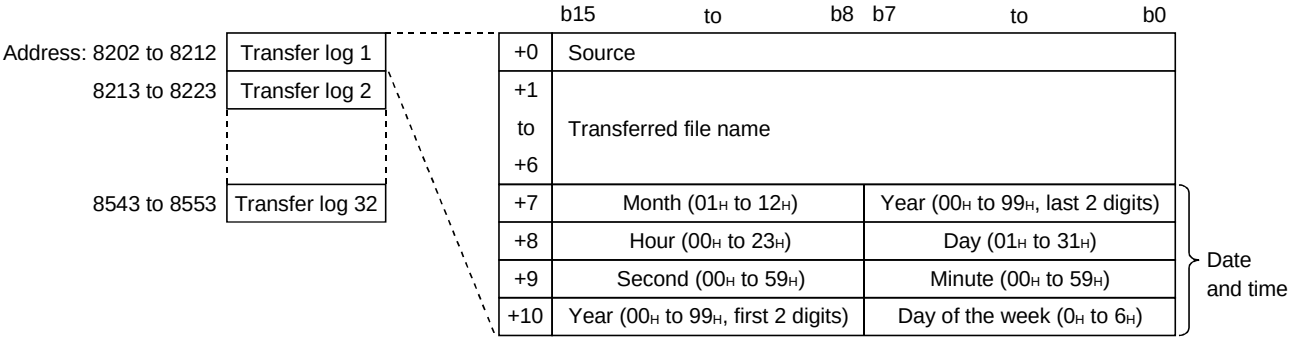
(c) Transfer log 1 to 32 (Address: 8202 to 8553)

This area stores the transfer logs of normally completed file transfer.
The transfer log area is composed of 32 portions of the same data arrangement.

1) Source
This area stores the source FTP server No. of the normally completed FTP transfer (GET).
The source FTP server No. is set in the FTP server setting.

2) Transferred file name
This area stores the transferred file name in ASCII code.

3) Date and Time
This area stores the date and time of file transfer in BCD code.



3.8.22 Module initialization request area (Address: 9999)

Use this area when returning the Web server module to the factory setting. (Refer to Section 4.13.)

3.9 Time Data Handling

This section explains the time data handled by the Web server module.

(1) Time data handled by Web server module

The Web server module acquires and uses the clock data of CPU No. 1 at the following timings. (*)

- When the PLC is powered off and then on or the CPU module is reset
- Every 60 seconds

* The time data is used mainly for the time stamp of logging and event history files and the time specification of logging and event monitor.

(2) Precautions for time data handled by Web server module

(a) Before operating the Web server module, complete the clock data setting of CPU No. 1.
For the clock data setting, refer to the user's manual of the used CPU module.

(b) Errors will be produced in the clock data of CPU No. 1 used for the Web server module.
For accuracy of the clock data, refer to the user's manual of the used CPU module.

(c) When the Web server module acquires the clock data of CPU No. 1, a maximum delay of one second occurs as transfer time. Hence, an error of one second may be produced in the logging data time on rare occasions when the clock is adjusted.
(Example) Error in logging data time

	2003/10/01 15:48:32.8	1028	30.5	21.8	15.9
Error	2003/10/01 15:48:32.9	1029	31.5	22.8	16.9
	2003/10/01 15:48:32.0	1030	32.5	23.8	17.9
	2003/10/01 15:48:32.1	1031	33.5	24.8	18.9
	2003/10/01 15:48:32.2	1032	34.5	25.8	19.9

Data are sampled normally at 100ms intervals.

(d) The clock data of CPU No. 1 is acquired by the Web server module at the timings indicated in (1). Therefore, when the clock data of CPU No. 1 is changed during operation, the time of the Web server module will be changed in a maximum of 60 seconds.

3.10 Files Handled by Web Server Module

This section indicates the files that can be handled by the Web server module.

Name	Description	Storage Directory ✻1	File Creation ✻2
Tag file	CSV file that saves tag data. Created when e-mail transmission/file transfer is performed.	—	System
Logging file	CSV file that saves logging data.	[/ROM/WWW/LOGGING] or [/CF/LOGGING]	System
Event history file	CSV file that saves event historical data.	[/ROM/WWW/EVENT]	System
User data file	Binary/CSV file created by the user. Used as a file for reading/writing the device data of the PLC CPU.	[/CF/USER]	User/system
User HTML file	HTML/JPEG/GIF file created by the user. Used as a Web screen.	[/ROM/WW/USER] or [/CF/USER]	User
Setting data file	CSV file that saves the setting data (various settings of control menu). Created when CSV export is executed. (Refer to Section 6.10.3)	[/ROM/WWW/USER/CSV] or [/CF/USER/CSV]	System ✻3

✻1 Refer to Appendix 3 for the directory configuration.

✻2 System : Created by the Web server module.
User : File can be created or modified by the user.

✻3 The setting data file created by CSV export can be edited by the user.

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4 SET-UP AND PROCEDURE BEFORE OPERATION

This chapter explains the set-up and preparatory procedure to operate the Web server module in a system.

POINT
(1) Prior to use, make sure to read the safety precautions in the beginning of this manual. (2) The mounting and installation environment of the Web server module are the same as those of the CPU module. For details, refer to the user's manual of the PLC CPU module.

4.1 Handling Precautions

This section explains the precautions for handling the Web server module.

(1) Do not drop or apply severe shock to the module case since it is made of resin.

(2) Tighten the module fixing screws within the specified torque range as follows:

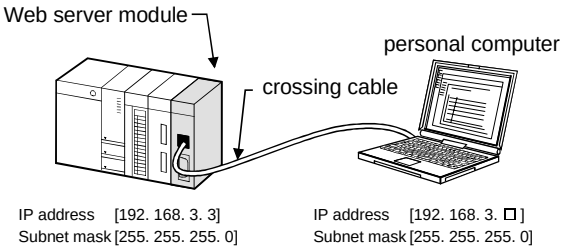
Screw position	Tightening torque range
Module fixing screw (usually not required) (M3 screw) (*1)	0.36 to 0.48 N•m

*1 The module can be easily fixed onto the base unit using the hook at the top of the module. However, it is recommended to secure the module with the dedicated fixing screws if it is subject to significant vibration or shock.

4.2 Set-up and Procedure before Operation

The following provides pre-operation procedure.

(1) Accessing the host CPU from the Web server module


Web server module
personal computer
crossing cable
IP address [192. 168. 3. 3]
Subnet mask [255. 255. 255. 0]
IP address [192. 168. 3. □]
Subnet mask [255. 255. 255. 0]

Procedures before operation

↓

Mount a battery to the Web server module. ・・・ Refer to Section 4. 10. 2.

↓

Mount a Web server module onto the base unit.

↓

Make one-to-one connection between the Web server module and personal computer with a crossing cable to make the network setting. ・・・ Refer to Section 4. 5.

↓

Set various functions from the Administrative menu.
- Tag setting
- Logging setting
- Event setting

・・・ Refer to Chapter 6.

↓

Click on "Update" button on the "Setting update" screen, or power the PLC OFF and ON or reset the CPU module, to update the settings on the Web server module. ・・・ Refer to Section 4. 6. 2.

↓

Monitor each operation on the monitor screen to confirm the setting. ・・・ Refer to Section 6.2.

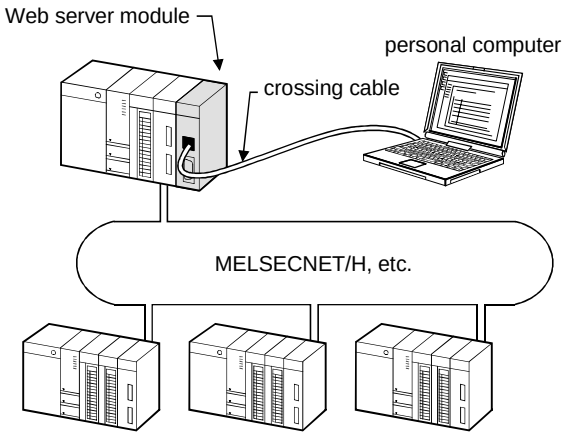
↓

Operation

POINT

The Web server module stores in the standard ROM the setting information, logging data, user HTML, etc. set in the Administrative menu.
It is recommended to back up the standard ROM data (setting information, logging data, user HTML, etc.) into the Compact Flash™ card periodically. (Refer to Section 6.10)

(2) Accessing the other station CPU from the Web server module



Procedures before operation

Confirm that the Web server module can access the host station CPU.	・・・ Refer to Section 4. 2. (1).
Confirm that the access target network system operates correctly.	・・・ Refer to the user's manual of the network module
Make one-to-one connection between the Web server module and personal computer with a crossing cable to make the network setting.	・・・ Refer to Section 4. 5.
Set the connection path to the access target CPU on "Access target CPU setting" from the Administrative menu.	・・・ Refer to Section 4. 6. 7.
Ensure the setting on the Web server module and then execute "Access target CPU test" from the Administrative menu to check the connection status.	・・・ Refer to Section 6. 11. 2.
Set various functions from the Administrative menu. ・ Tag setting ・ Logging setting ・ Event setting	・・・ Refer to Chapter 6.
Click on "Update" button on the "Setting update" screen, or power the PLC OFF and ON or reset the CPU module, to update the settings on the Web server module.	・・・ Refer to Section 4. 6. 2.
Monitor each operation on the monitor screen to confirm the setting.	・・・ Refer to Section 6.2.

Operation

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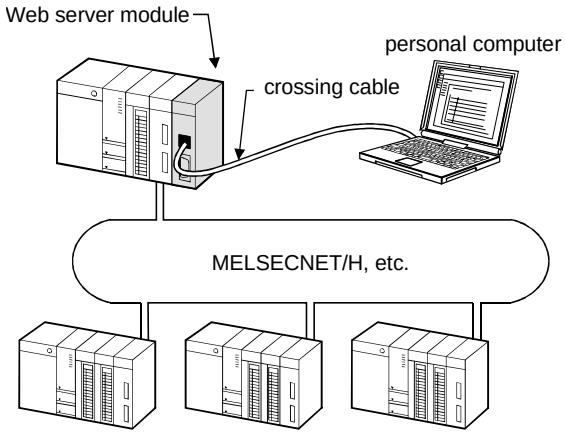
(3) Connecting the Web server module to the network



Procedures before operation

Confirm that the Web server module can access the host station CPU and/or other station CPU.

・・・ Refer to Section 4. 2. (1). (2).

A contract with the Internet service provider is required prior to the Internet connection.
Create a proper environment for the external device Personal computer so that Internet connection is available.

Make one-to-one connection between the Web server module and personal computer with a crossing cable to make the network setting.

・・・ Refer to Section 4. 5.

Make network setting for the Web server module on the following screen from the Administrative menu.
- System setting
- Dial-up setting
- FTP setting
- E-mail setting
- Address notification setting
- Account setting
- IP filter setting

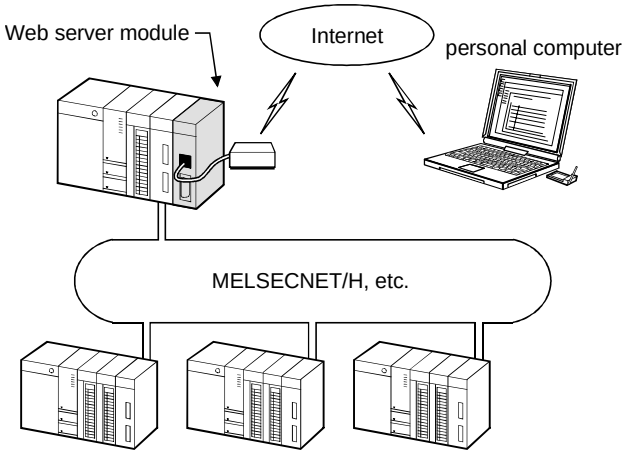
・・・ System setting : Refer to Section 4. 6. 3.
Dial-up setting : Refer to Section 4. 6. 4.
FTP setting : Refer to Section 6. 7. 3.
E-mail setting : Refer to Section 6. 6. 3.
Address notification setting : Refer to Section 6. 9. 2.
Account setting : Refer to Section 4. 6. 5.
IP filter setting : Refer to Section 4. 6. 6.

Power off the PLC and disconnect the crossing cable from the Web server module.

Connect the Web server module to the LAN, modem, etc.

・・・ Refer to Section 4.4.

1)



1)

Power the PLC ON and connect the Web server module to the network. · · · Refer to Chapter 5.

Obtain an address for the Web server module using the Address Notification function.

Start up the Web browser on a personal computer and access the Web server module. · · · Refer to Section 4. 6. 2.

Set various functions from the Administrative menu. · · · Refer to Chapter 6.
- Tag setting
- Logging setting
- Event setting

Click on "Update" button on the "Setting update" screen, or power the PLC OFF and ON or reset the CPU module, to update the settings on the Web server module. · · · Refer to Section 4. 6. 2.

Monitor each operation on the monitor screen to confirm the setting. · · · Refer to Section 6. 2.

Operation

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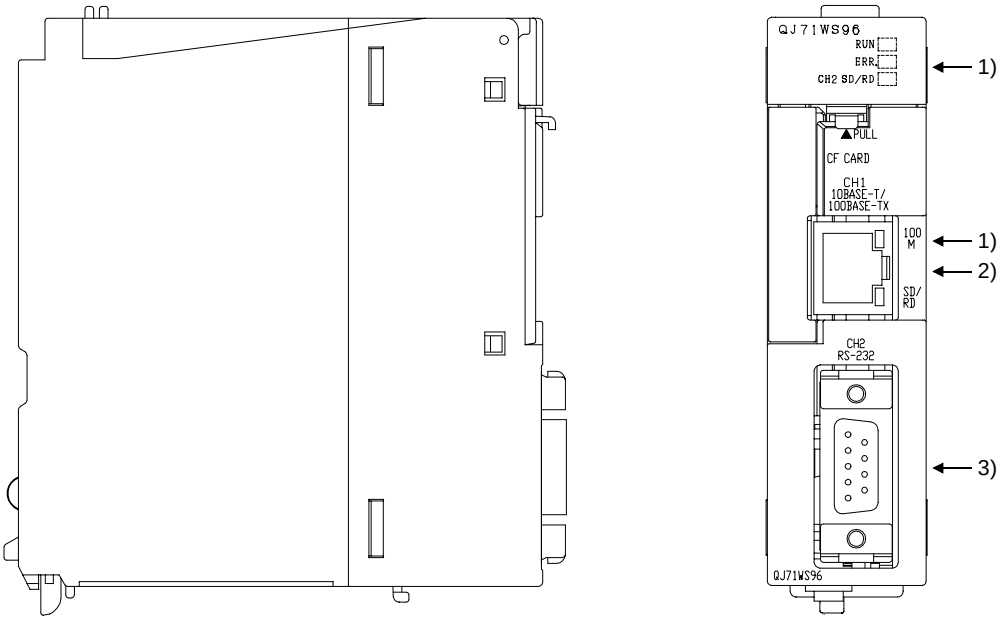
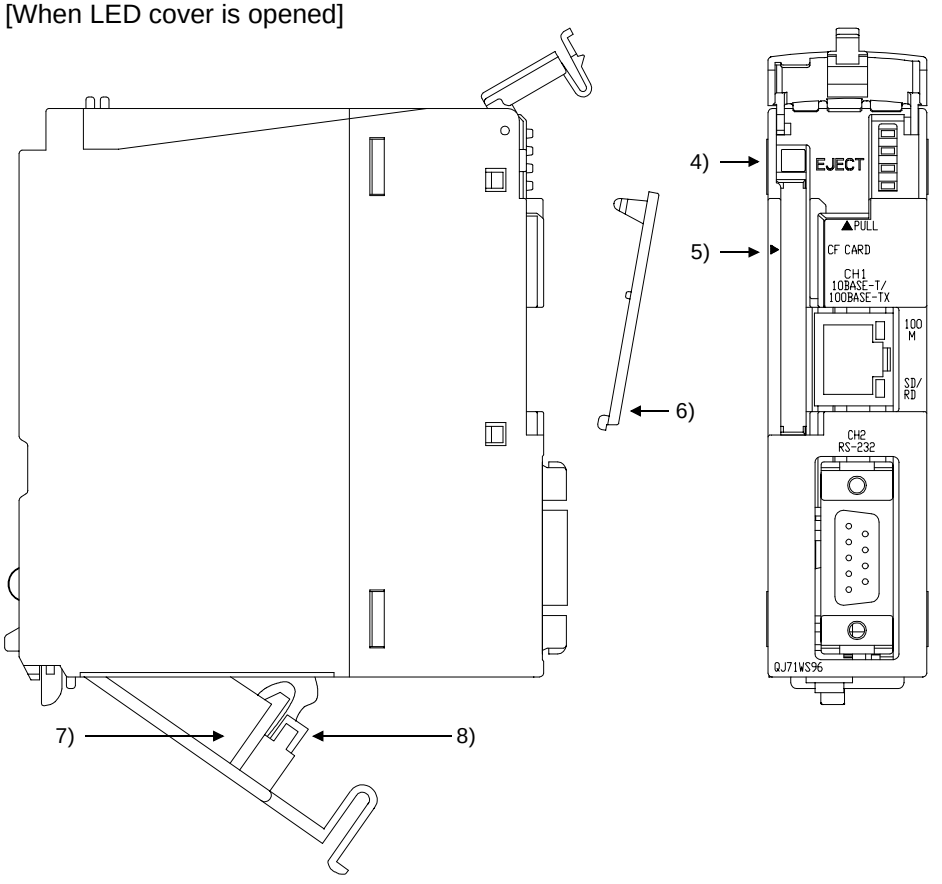
4.3 Part Names and Functions

This section indicates the part names of the Web server module.

[When LED cover is closed]



[When LED cover is opened]



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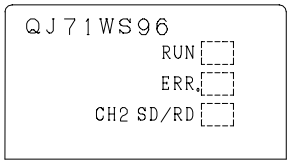
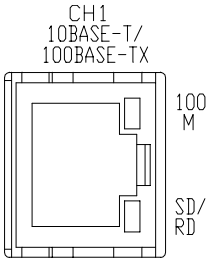
	Name	Description
1)	LED Display	Refer to (1) LED display.
2)	10BASE-T/ 100BASE-TX interface connector (RJ45)	Used for connecting Web server module to 10BASE-T/100BASE-TX. (Web server module recognizes 10BASE-T/100BASE-TX according to the external device.)
3)	RS-232 interface connector	Used for connecting Web server module to RS-232.
4)	EJECT button	Used for ejecting a Compact Flash™ card from Web server module.
5)	Compact Flash™ card mounting slot	Slot for mounting a Compact Flash™ card onto Web server module.
6)	Compact Flash™ card mounting slot cover	Cover for Compact Flash™ card mounting slot.
7)	Battery	Battery for file protection.
8)	Battery connector pin	Connector pin for battery lead. (The battery lead is not connected to the connector at shipment to prevent battery consumption.)

(1) LED display





LED name	LED status	Description
RUN	ON	Normally operating (It may take some time until RUN LED turns ON after the module is started.)
	OFF	Watch dog timer error occurrence (Hardware error)
ERR.	OFF	Normal operation
	ON	Module continue error
	Flickering	Module stop error
CH2 SD/RD	ON	CH2 side: data receiving or data sending
	OFF	Data not transmitted
100M	ON	100Mbps
	OFF	10Mbps
SD/RD	ON	CH1 side: data receiving or data sending
	OFF	Data not transmitted

4.4 Cable Connection

This section explains how to connect cables to the Web server module.

To realize a reliable system and fully utilize the Web server module functions, wiring resistant to external noise is required.

(1) Ground the RS-232 Cable shield at only one point.

(2) When connecting to an external device with an RS-232 cable, use a connector shell specified in Section 3.2 for the Web server module side.

(3) Sufficient safety precautions must be taken when installing the 100BASE-TX and 10BASE-T networks.
Consult a specialist when connecting cable terminals or installing trunk line cables, etc.

(4) Use a 10BASE-T/100BASE-TX connection cable compliant to the standards shown in Section 2.4.

(5) The bending radius near the connectors should be four times larger or more than the cable's outside diameter.

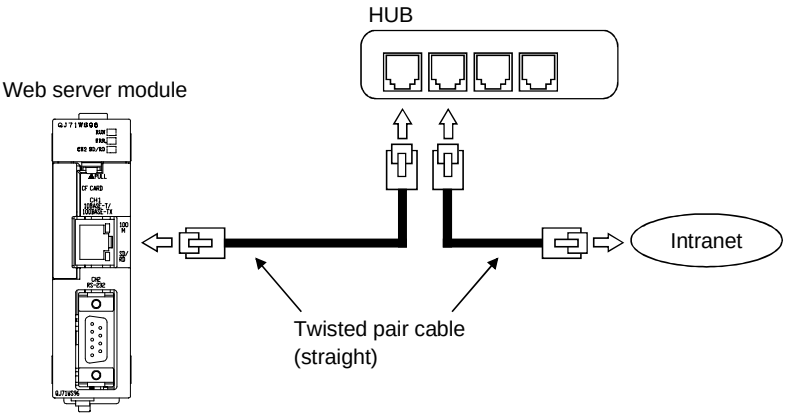
(6) Connect the external device according to its specifications.

(7) Do not short the FG signal and SG signal of the RS-232 connection cable.
When the FG signal and SG signal are connected inside the external device, do not connect the FG signal to the Web server module.

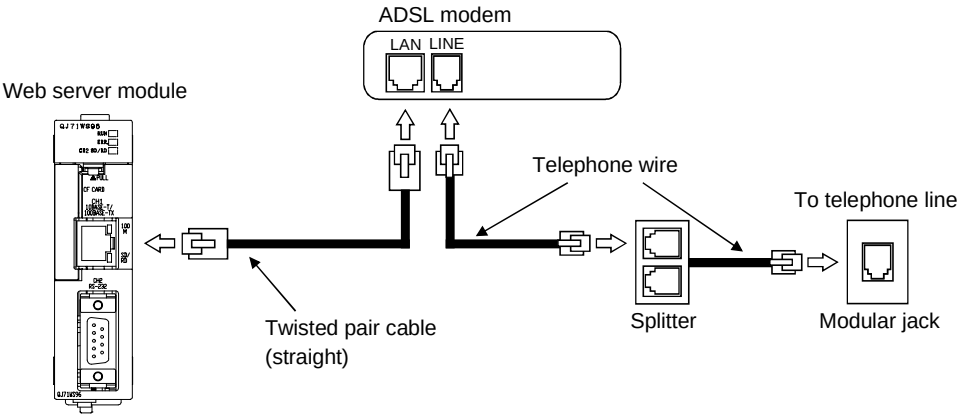
4.4.1 10BASE-T/100BASE-TX connection

This section provides connection examples for use of the 10BASE-T/100BASE-TX interface of the Web server module.

(1) In the case of LAN connection



(2) In the case of Internet connection using ADSL modem



POINT
Refer to Section 2.2 and Section 2.4 for the devices required for 10BASE-T/100BASE-TX connection and the system configuration examples.

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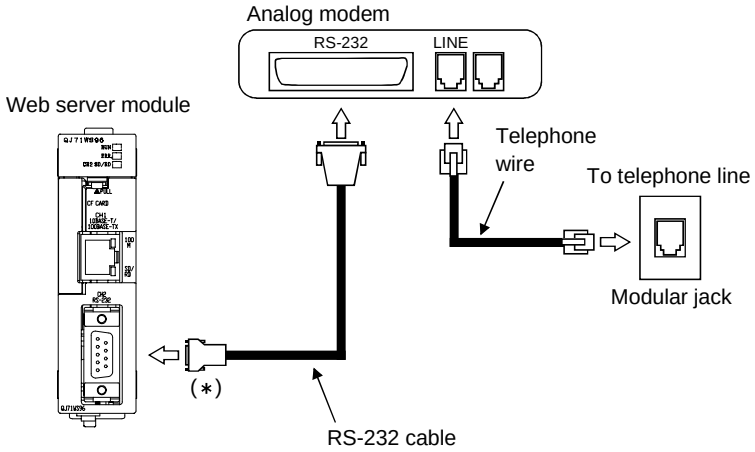
4.4.2 RS-232 connection

This section provides a connection example for use of the RS-232 interface of the Web server module.

- In the case of Internet connection using analog modem



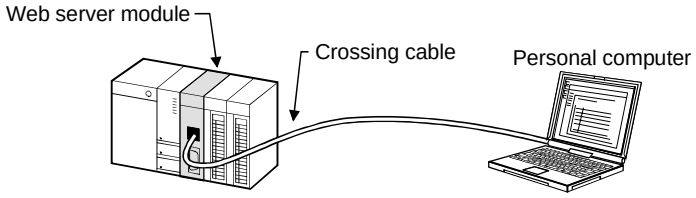
* For a connector of the web server module, use 9 pin D-sub (Male) fixing type. (Refer to Section 3. 2.)

POINT
Refer to Section 2.2 and Section 2.4 for the devices required for RS-232 connection and the system configuration example.

4.5 Network Setting of Personal Computer for One-to-one Connection

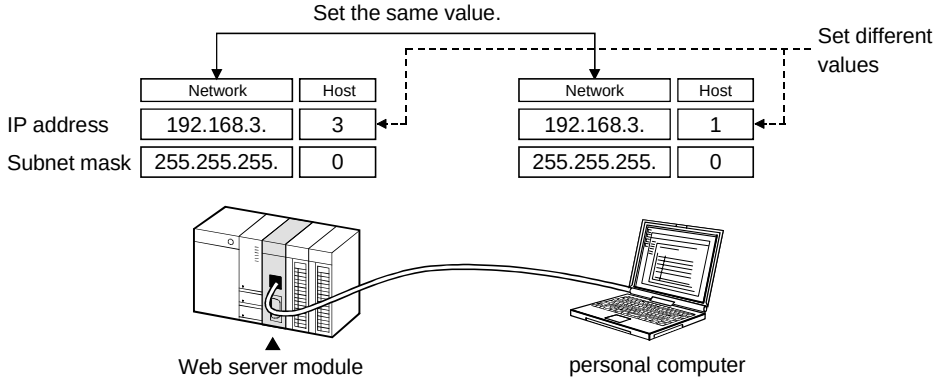
Connect the Web server module with the personal computer on a one-to-one basis, and set the Web server module from the Web browser on the personal computer. This section explains the network setting of the personal computer when the Web server module and personal computer are connected on a one-to-one basis.

(1) System configuration for one-to-one connection



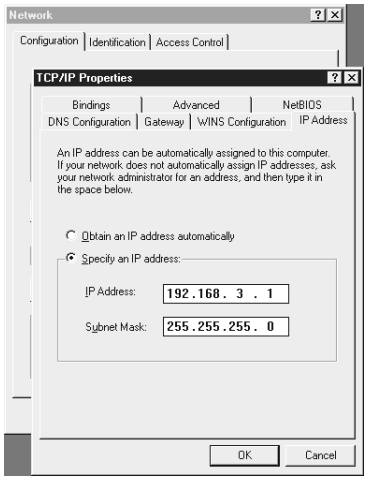
(2) Network setting of personal computer

(a) Set the personal computer and the Web server module to the same network address.



(b) Make the network setting of the personal computer on the "TCP/IP Properties" screen.

(Example) In the case of Microsoft® Windows® 98 operating system
[Control panel] → [Network] → <Configuration> tab → "TCP/IP Properties" Screen → <IP Address> tab



(c) Restart the personal computer to make the network setting valid.

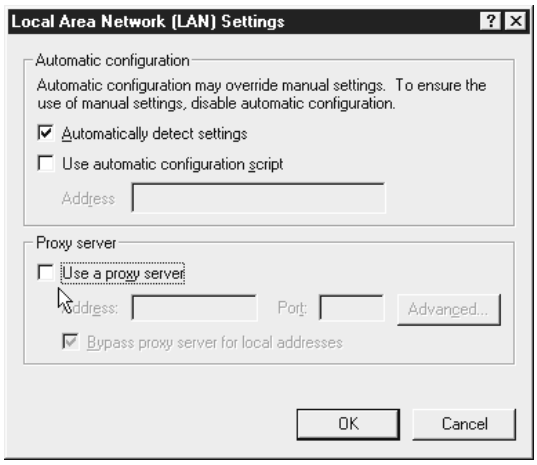
(3) Web browser setting

(a) Local area network [LAN] setting

In Local Area Network [LAN] Settings of the Web browser, make setting so that the proxy server is not used at the local address.

(Example) In the case of Microsoft® Windows® 98 operating system or Microsoft® Corporation's Internet Explorer 5.5

[Tools] → [Internet Options] → <Connections> tab → LAN Settings… → "Local Area Network [LAN] Settings" Screen

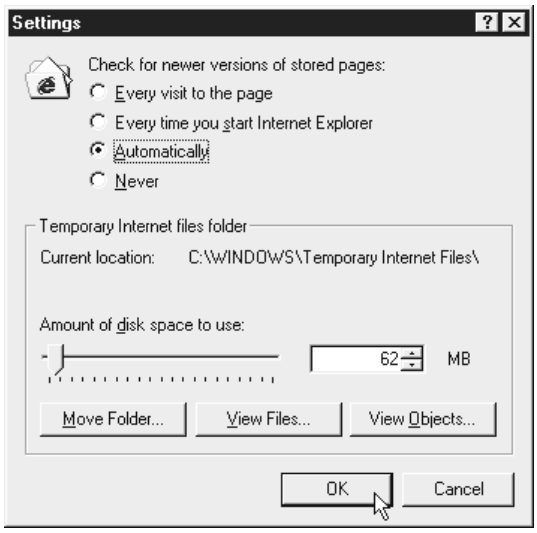


(b) Temporary Internet files settings/delete

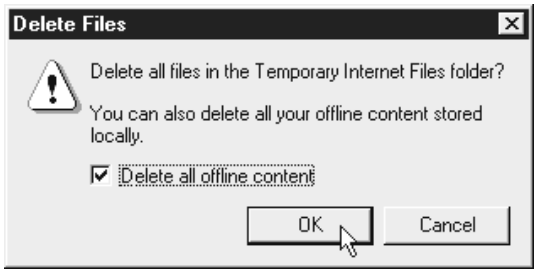
1) Select any other than "Never" for "Check for newer versions of stored pages" in the temporary Internet files settings of the Web browser. If "Never" it set, the old screen (the one saved in the temporary Internet files) is displayed unchanged when the file is read from the Edit screen, etc.

(Example) In the case of Microsoft® Windows® 98 operating system or Microsoft® Corporation's Internet Explorer 5.5

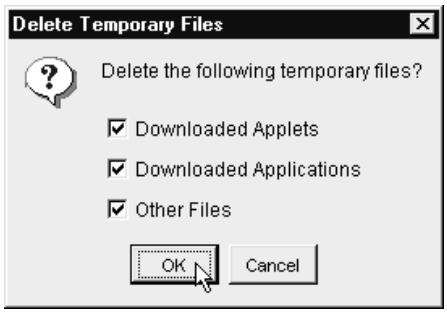
[Tools] → [Internet Options] → <General> tab → Temporary Internet Files Settings… → "Settings" Screen



2) The old screen (the one saved in the temporary Internet files) may be displayed unchanged if the file is read from the User HTML, Edit screen, etc.
In that case, delete the temporary Internet files (cache) of the Web browser and read the file again.
(Example) In the case of Microsoft® Windows® 98 operating system or Microsoft® Corporation's Internet Explorer 5.5
[Tools] → [Internet Options] → <General> tab → Temporary Internet Files Delete Files... → "Delete Files" Screen

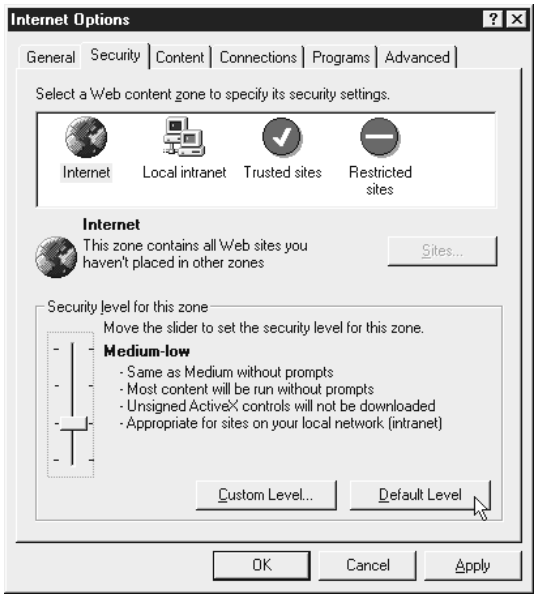

Delete Files
Delete all files in the Temporary Internet Files folder?
You can also delete all your offline content stored locally.
Delete all offline content
OK
Cancel

(Example) When using Java VM of Sun Microsystems Inc. for <applet>
[Control Panel] → [Java] → <General> tab → Delete Files → "Delete Temporary Files" Screen



POINT
To shorten the page display time, the Web browser saves one-displayed pages in a special folder (temporary Internet files).

(c) Security level setting
In the security level setting of the Web browser, set the security level of the Internet and Intranet zones to "Default Level".
(Example) In the case of Microsoft® Windows® 98 operating system or Microsoft® Corporation's Internet Explorer 5.5
[Tools] → [Internet Options] → <Security> tab

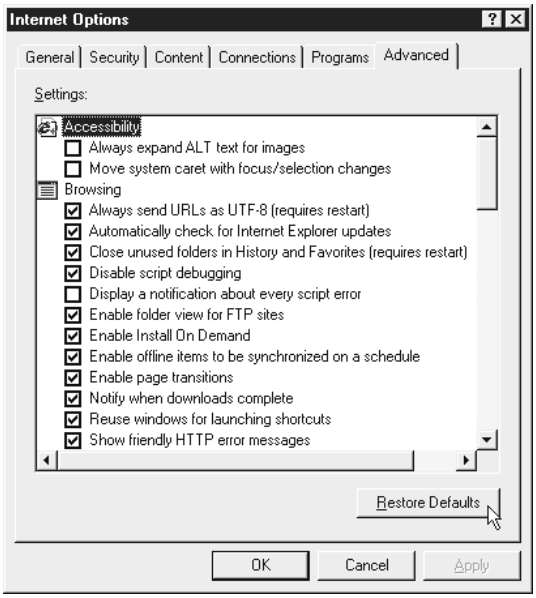


(d) Detailed setting

In the advanced settings of the Web browser, set to "Restore Defaults".

(Example) In the case of Microsoft© Windows© 98 operating system or Microsoft© Corporation's Internet Explorer 5.5

[Tools] → [Internet Options] → <Advanced> tab

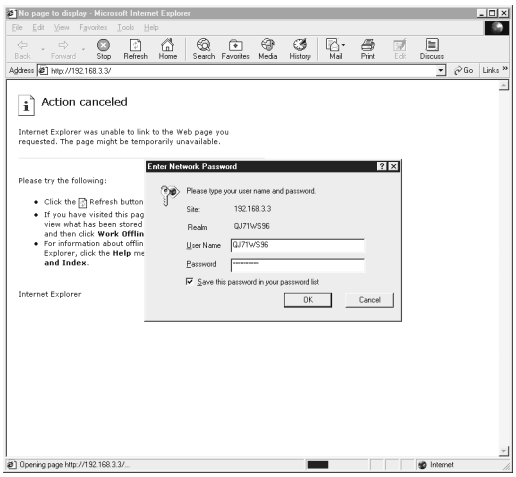


(4) Accessing the Web server module from the personal computer

(a) Start the Web browser from the personal computer and enter the address of the Web server module as indicated below.
[http://192.168.3.3/]

(b) As the user authentication screen ("Enter Network password " screen) appears when accessing the Web server module, enter the following.
User name : QJ71WS96 (All in uppercase)
Password : MITSUBISHI (All in uppercase)

(c) The standard screen appears on the Web browser.
(Example) In the case of Microsoft® Corporation's Internet Explorer 5.5

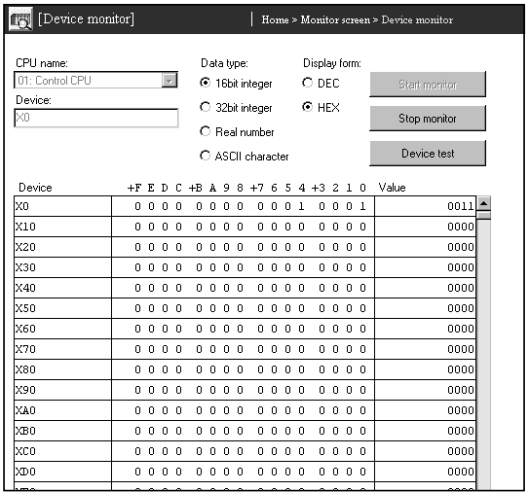

No page to display - Microsoft Internet Explorer
Action canceled
Internet Explorer was unable to link to the Web page you requested. The page might be temporarily unavailable.
Please try the following:
Enter Network Password
Please type your user name and password.
Site: 192.168.3.3
Realm GJ71WS96
User Name GJ71WS96
Password
Save this password in your password list
OK
Cancel
Internet Explorer

POINT
If access to the Web server module fails, first issue the PING command from the personal computer to the Web server module to check the existence of the Web server module. Refer to Section 6.11.3 for how to issue the PING command.

(5) Accessing the host CPU of the Web server module

(a) Display the "Device monitor" screen Within the Monitor screen.
[Monitor screen] → "Device monitor"

(b) Access the host CPU of the Web server module and confirm that the following input signals (X) are on.
Module READY (X0)
Network connection status (X4)



(c) Since the monitor screens use the Java applet, Java VM is required for the Web browser to execute the applet.
Refer to Section 3.1 Remarks (2) (3) for how to download Java VM.

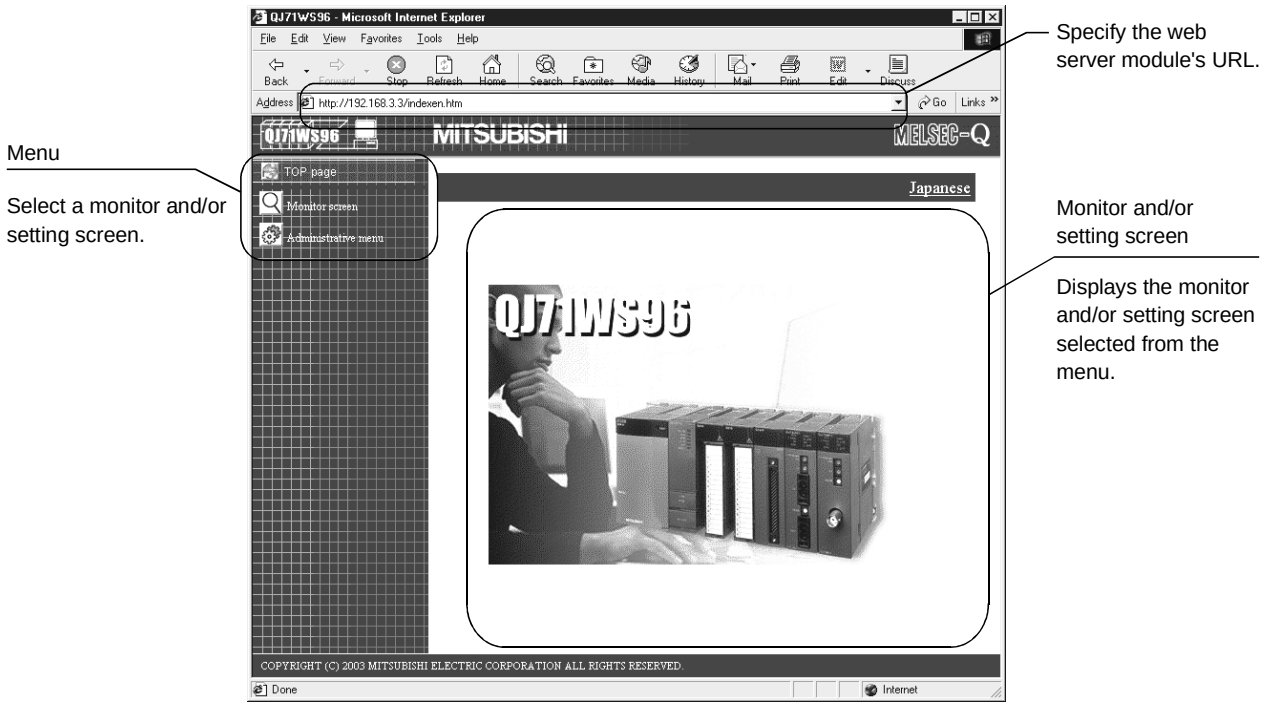
4.6 Setting from Web Browser

It is required to make setting from the Web browser to use the Web server module.
The Web server module has the standard screen for setting/monitoring the Web server module.

4.6.1 Display of standard screen

The following shows the display of the standard screen.
Although English and Japanese versions are provided, when a browser in English is used, the standard screen is displayed in English. (The language to be used will be automatically determined according to the language of the browser.)

* When displaying the TOP page of the standard screen using an operating system and a Web browser of English version, do not click on the "Japanese" button provided for link to the Japanese version.
  Doing so may display an incorrect screen.



[Menu items]

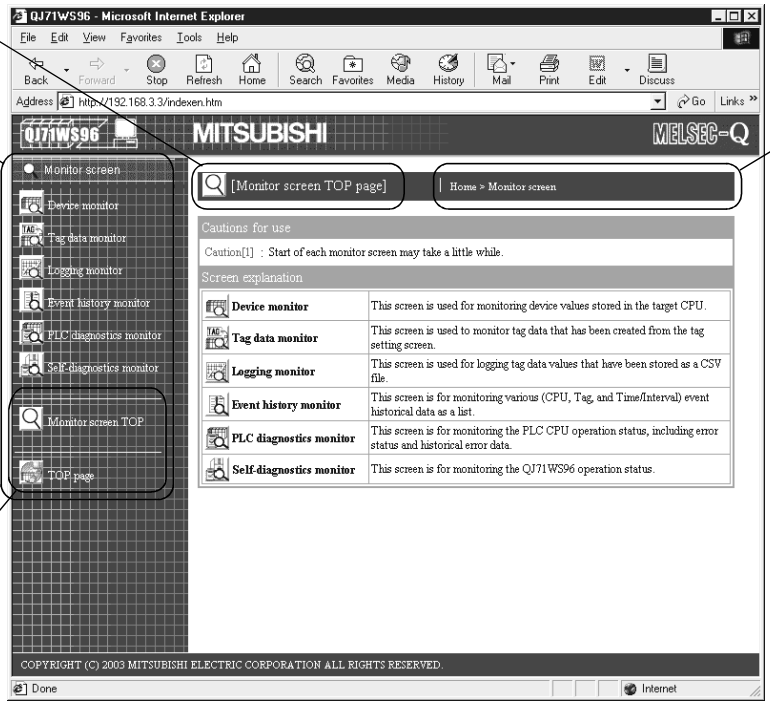
Item	Description
Top page	This screen is displayed first when the URL of the Web server module is specified.
Monitor screen	Monitors device data, tag data, logging data, event historical data, PLC diagnostics and self-diagnostics.
Administrative menu	Allows initial setting, various function setting, setting test, etc. for use of the Web server module. Only the user with administrator authority can use the menu.

(1) Monitor screen

Screen name
Screen name will be displayed.

Menu
Select a monitor screen.

Click on the button to move to the monitor screen top page or the default top page.


QJ71WS96 - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History Mail Print Edit Discuss
Address http://192.168.3.3/indexen.htm
Go Links
QJ71WS96
MITSUBISHI
MELSEC-Q
Monitor screen
Device monitor
Tag data monitor
Logging monitor
Event history monitor
PLC diagnostics monitor
Self-diagnostics monitor
Monitor screen TOP
TOP page
[Monitor screen TOP page]
Home > Monitor screen
Cautions for use
Caution[1] : Start of each monitor screen may take a little while.
Screen explanation
Device monitor
This screen is used for monitoring device values stored in the target CPU.
Tag data monitor
This screen is used to monitor tag data that has been created from the tag setting screen.
Logging monitor
This screen is used for logging tag data values that have been stored as a CSV file.
Event history monitor
This screen is for monitoring various (CPU, Tag, and Time/Interval) event historical data as a list.
PLC diagnostics monitor
This screen is for monitoring the PLC CPU operation status, including error status and historical error data.
Self-diagnostics monitor
This screen is for monitoring the QJ71WS96 operation status.
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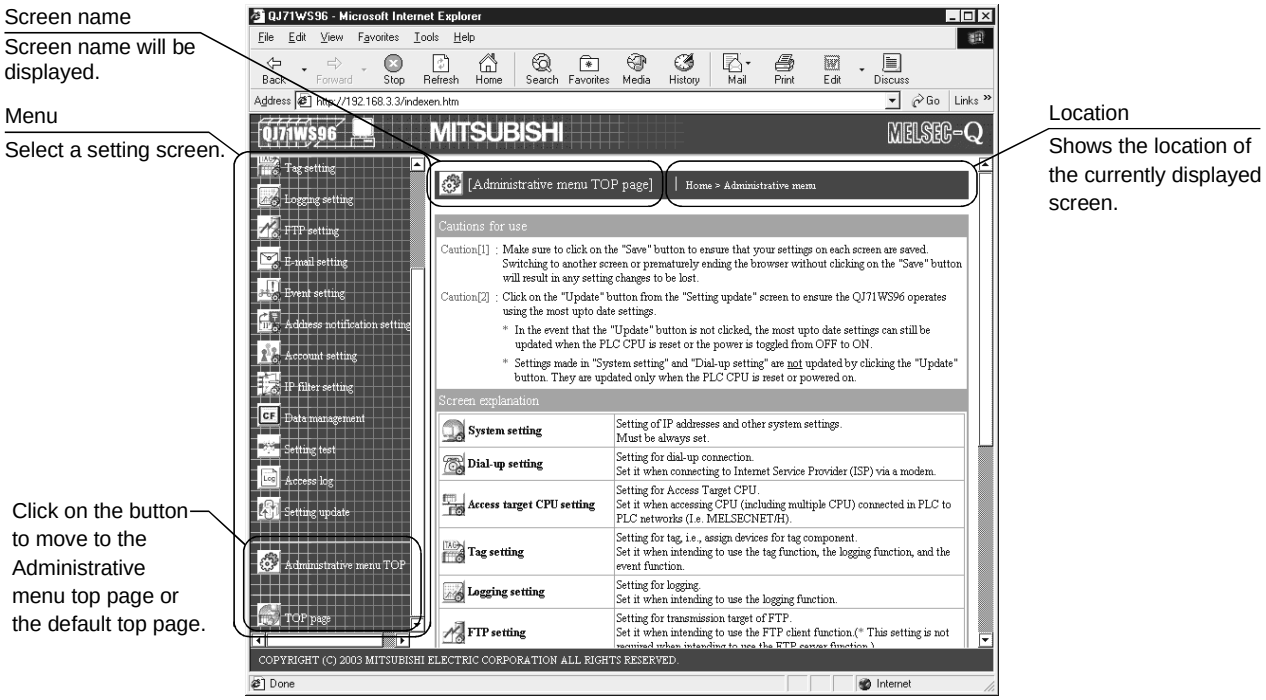
Done
Internet

Location
Shows the location of the currently displayed screen.

[Menu items]

Item	Description	Reference Section
Device monitor	Monitors device values.	Section 6.2
Tag data monitor	Monitors tag data.	
Logging monitor	Monitors logging data.	
Event history monitor	Monitors event historical data.	
PLC diagnostics monitor	Monitors PLC CPU operation status.	
Self-diagnostics monitor	Monitors Web server module operation status.	

(2) Administrative menu


Screen name
Screen name will be displayed.
Menu
Select a setting screen.
Location
Shows the location of the currently displayed screen.
Click on the button to move to the Administrative menu top page or the default top page.
QJ71WS96 - Microsoft Internet Explorer
MITSUBISHI
MELSEC-Q
QJ71WS96
Tag setting
Logging setting
FTP setting
E-mail setting
Event setting
Address notification setting
Account setting
IP filter setting
Data management
Setting test
Access log
Setting update
Administrative menu TOP
TOP page
[Administrative menu TOP page]
Home > Administrative menu
Cautions for use
Caution[1] : Make sure to click on the "Save" button to ensure that your settings on each screen are saved. Switching to another screen or prematurely ending the browser without clicking on the "Save" button will result in any setting changes to be lost.
Caution[2] : Click on the "Update" button from the "Setting update" screen to ensure the QJ71WS96 operates using the most upto date settings.
* In the event that the "Update" button is not clicked, the most upto date settings can still be updated when the PLC CPU is reset or the power is toggled from OFF to ON.
* Settings made in "System setting" and "Dial-up setting" are not updated by clicking the "Update" button. They are updated only when the PLC CPU is reset or powered on.
Screen explanation
System setting
Setting of IP addresses and other system settings. Must be always set.
Dial-up setting
Setting for dial-up connection. Set it when connecting to Internet Service Provider (ISP) via a modem.
Access target CPU setting
Setting for Access Target CPU. Set it when accessing CPU (including multiple CPU) connected in PLC to PLC networks (I.e. MELSECNET/H).
Tag setting
Setting for tag, i.e., assign devices for tag component. Set it when intending to use the tag function, the logging function, and the event function.
Logging setting
Setting for logging. Set it when intending to use the logging function.
FTP setting
Setting for transmission target of FTP. Set it when intending to use the FTP client function.(* This setting is not
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Done
Internet

[Menu items]

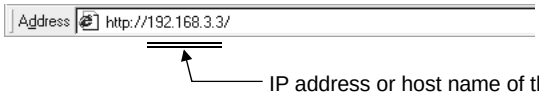
Item	Description	Reference Section
System setting	Makes the initial setting required for network connection. Be sure to perform this setting to use the Web server module.	Section 4.6.3
Dial-up setting	Makes setting required for Internet connection.	Section 4.6.4
Access target CPU setting	Sets the connection path to the access target CPU.	Section 4.6.7
Tag setting	Makes setting for tag data collection.	Section 6.3
Logging setting	Sets the logging intervals, file capacity, etc. of logging data.	Section 6.4
FTP setting	Makes the setting to log in to the FTP server.	Section 6.7
E-mail setting	Sets the send server, e-mail address, etc.	Section 6.6
Event setting	Sets the event monitor conditions.	Section 6.5
Address notification setting	Makes the setting to notify the external device of the Web server module's URL.	Section 6.9
Account setting	Sets the account for making access to the Web server module.	Section 4.6.5
IP filter setting	Sets the IP address at which access to the Web server module is enabled/disabled.	Section 4.6.6
Data management	Backs up, restores and formats the Compact Flash™ card, and performs CSV export/import.	Section 6.10
Setting test	Conducts connection tests such as e-mail transmission, file transfer and PING tests.	Section 6.11
Access log	Displays the access log to the Web server module.	Section 6.8
Setting update	Updates the setting made in the Administrative menu on the Web server module operation.	Section 4.6.2 (3)

4.6.2 Common operations for the standard screen

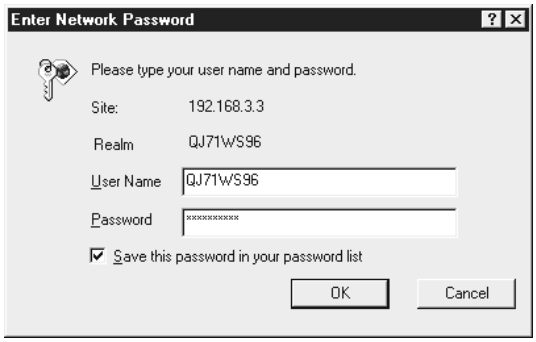
This section explains the common operations for the standard screen.
Refer to the corresponding sections for the monitor and set screens.

(1) Standard screen displaying procedure

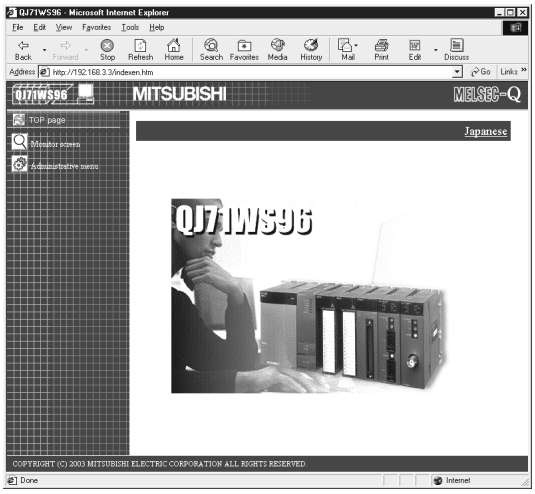
(a) Start the Web browser from the personal computer and enter the Web server module's address. Refer to Section 4.6.3 for the IP address setting. (*1)



(b) As the user authentication screen ("Enter Network password" screen) appears when accessing the Web server module, enter the account. Refer to Section 4.6.5 for the account setting. (*2)



(c) The top page of the standard screen is displayed on the Web browser. (*3)



*1 Prior to shipment, the IP address of the Web server module is set as indicated below.
- IP address: 192.168.3.3
- Subnet mask: 255.255.255.0

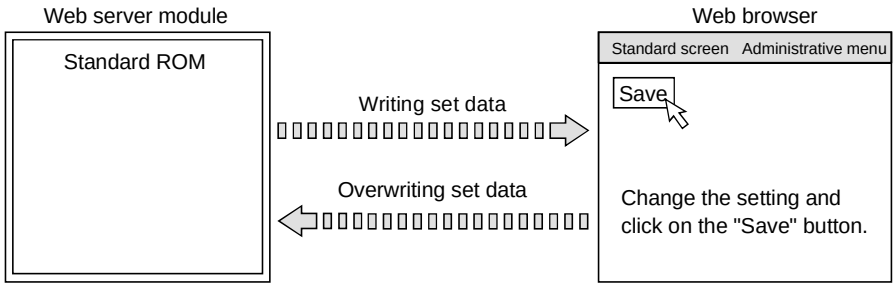
*2 Prior to shipment, the account of the Web server module is set as indicated below.
- User name: QJ71WS96 (All in uppercase)
- Password: MITSUBISHI (All in uppercase)
- Access authority: Device write/Tag component write/Administrator
- Initial screen: Standard screen top page (Top page (/index.htm))

*3 The top page displayed when the address of the Web server module is specified can be changed on the account setting screen. (Refer to Section 4.6.5)

(2) Saving the Administrative menu settings

(a) On setting screens of the Administrative menu, change the settings and then click on the "Save" button.

(b) Clicking on the "Save" button writes the new settings over the set data of the Web server module. (The old data before overwrite are lost.)



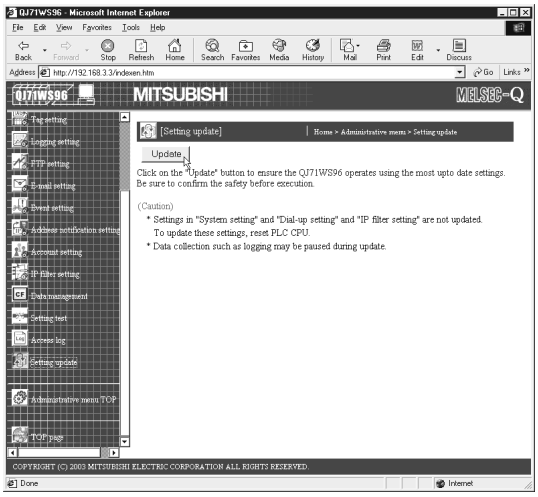
POINT

On setting screens of the Administrative menu, make sure to click on the "Save" button after changing the settings.
Switching to another screen or ending the Web browser before clicking on the "Save" button deletes the new settings.

(3) Updating the Administrative menu settings

(a) Update on the Setting update screen

1) Click on the "Update" button on the Setting update screen to update the settings on the Web server module.


QJ71WS96 - Microsoft Internet Explorer
MITSUBISHI
MELSEC-Q
[Setting update]
Update
Click on the "Update" button to ensure the QJ71WS96 operates using the most upto date settings.
Be sure to confirm the safety before execution.
(Caution)
* Settings in "System setting" and "Dial-up setting" and "IP filter setting" are not updated.
To update these settings, reset PLC CPU.
* Data collection such as logging may be paused during update.

2) In the following message box, confirm that the settings have been updated.

Microsoft Internet Explorer
The settings have been updated.
The QJ71WS96 has started operation using the new settings.
OK

(b) Update by powering off the Web server module and on, or resetting the CPU module

Powering the PLC off and then on or resetting the CPU module updates the settings made on the setting screen on the Web server module.

POINT

(1) The system settings, dial-up settings and IP filter settings are not updated by clicking on the "Update" button.
Powering the PLC off and then on or resetting CPU module makes the settings valid.

(2) Web server module requires preparatory time to communicate with the access target CPU when the "Update" button on the Setting update screen is clicked. Therefore, it may take several minutes before the communication will be available if many access target CPUs are set.
In the message box, confirm that setting update has been completed.

(3) Web server module requires preparatory time to communicate with the access target CPU when the PLC is powered off and then on, or the CPU module is reset. Therefore, it may take several minutes before the communication will be available if many access target CPUs are set.
The Web server module completion can be confirmed by making sure that Module READY (X0) is on.

(4) When access is made from the personal computer to the Web server module during preparation of the Web server module, the "Page cannot be displayed" message is returned to the Web browser. Therefore, after the Web server module has been prepared, make access from the Web browser again.

4.6.3 System setting

[Setting Purpose]

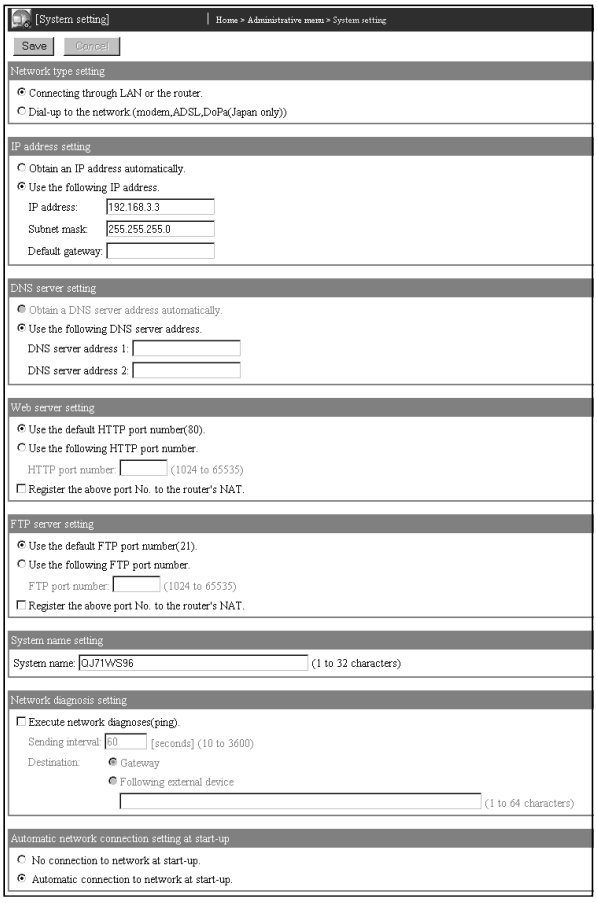
Makes the initial setting required for the Web server module to connect to the network.

Be sure to make this setting to use the Web server module.

[Start Procedure]

[Administrative menu] → "System setting"

[Setting Screen]


[System setting]
Home > Administrative menu > System setting
Save
Cancel
Network type setting
Connecting through LAN or the router.
Dial-up to the network.(modem,ADSL,DoPa(Japan only))
IP address setting
Obtain an IP address automatically.
Use the following IP address.
IP address: 192.168.3.3
Subnet mask: 255.255.255.0
Default gateway:
DNS server setting
Obtain a DNS server address automatically.
Use the following DNS server address.
DNS server address 1:
DNS server address 2:
Web server setting
Use the default HTTP port number(80).
Use the following HTTP port number.
HTTP port number: (1024 to 65535)
Register the above port No. to the router's NAT.
FTP server setting
Use the default FTP port number(21).
Use the following FTP port number.
FTP port number: (1024 to 65535)
Register the above port No. to the router's NAT.
System name setting
System name: QJ71WS96 (1 to 32 characters)
Network diagnosis setting
Execute network diagnoses(ping).
Sending interval: 60 [seconds] (10 to 3600)
Destination: Gateway
Following external device
(1 to 64 characters)
Automatic network connection setting at start-up
No connection to network at start-up.
Automatic connection to network at start-up.

[Setting Item]

Item	Description
Network type setting	Sets the connection method of the Web server module to the network.
IP address setting	Sets the IP address for the Web server module.
DNS server setting	Sets the IP address for the DNS server.
Web server setting	Sets the HTTP port number for the Web server module.
FTP server setting	Sets the FTP port number of the Web server module.
System name setting	Sets the system name.
Network diagnosis setting	Sets whether network diagnoses (ping) will be executed or not.
Automatic network connection setting at start-up	Set whether automatic network connection will be made or not at a start.
Save	Saves the settings. The settings are updated when the PLC is powered off and then on, or the CPU module is reset.
Cancel	Discards new data and return to the old setting.

(1) Network type setting

Set the connection method of the Web server module to the network.

(a) Select the connection method of the Web server module to the network.

Item	Description
Connecting through LAN or the router.	Select this item when connecting through LAN or the router.
Dial-up to the network. (Modem, ADSL)	Select this item in the case of Internet connection using dial-up connection.

(b) When connecting to the Internet, make the setting necessary for the Internet connection in the dial-up setting. (Refer to Section 4.6.4.)

(2) IP address setting

Set the IP address for the Web server module.

(a) Select the IP address obtaining method.

Item	Description
Obtain an IP address automatically.	Select this item when obtaining the IP address automatically.
Use the following IP address.	Select this item when using the specified IP address.

(b) When "Use the following IP address." has been selected, set the IP address, subnet mask and default gateway in decimal number.

1) IP address
   Set the IP address for the Web server module.
   (Example) 192.168.3.3
2) Subnet mask
   Make setting when using a subnet mask.
   The devices on the same network must have a common subnet mask.
   (Example) 255.255.255.0
3) Default gateway
   - Set the default gateway.
   - One gateway can be registered for a Web server module.

(c) Set the IP address, subnet mask and default gateway after consulting the network administrator (person in charge of network planning, IP address management, etc.).

(3) DNS server setting

Set the IP address for the DNS server.

(a) Select the method of obtaining the IP address of the DNS server.

Item	Description
Obtain a DNS server address automatically.	Select this item when obtaining the IP address of the DNS server automatically.
Use the following DNS server address.	Select this item when using the specified DNS server IP address.

(b) When "Use the following DNS server address." has been selected, set the IP address of the DNS server in decimal number.
Up to two DNS servers can be registered for a web server module.
When obtaining the IP address from the domain name, retrieve it from the DNS server of the DNS server address 1.

(c) Make the DNS server setting after consulting the network administrator (person who in charge of network planning, IP address management, etc.).

POINT
The DNS server setting is required when the SMTP server or FTP server is set with the domain name.

(4) Web server setting

Set the HTTP port number for the Web server module.

(a) Select the HTTP port number for the Web server module.
It is recommended to use the default value (80) of the HTTP port number.

Item	Description
Use the default HTTP port number (80).	Select this item when using the HTTP port number (80).
Use the following HTTP port number	Select this item when using the specified HTTP port number.

1) When "Use the following HTTP port number." has been selected, set the HTTP port number in decimal number.
   • 1024 to 65535: HTTP port number
2) Set the HTTP port number after consulting the network administrator (person in charge of network planning, IP address management, etc.).

(b) "Register the above port No. to the router's NAT."
When this setting is valid, the packet sent to the HTTP port number (*1) of the router's WAN side (Internet side) is transferred to the HTTP port number (*1) of the Web server module. (Refer to Remarks (2) in this section for NAT.)

*1 Port number set in the Web server setting. (Refer to the above (a).)

(5) FTP server setting

Set the FTP port number of the Web server module.

(a) Select the FTP port number used for the Web server module.
It is recommended to use the default value (21).

Item	Description
Use the default FTP port number (21).	Select this item when using the FTP port number (21).
Use the following FTP port number.	Select this item when using the specified FTP port number.

1) When "Use the following FTP port number." is selected, set the FTP port number in decimal.
   • 1024 to 65535: FTP port number
2) Consult the network administrator (person who plans the network and manages the IP address) before setting the FTP port number.

(b) "Register the above port No. to the router's NAT."
When this setting is valid, the packet sent to the FTP port number (*1) of the router's WAN side (Internet side) is transferred to the FTP port number (*1) of the Web server module. (Refer to Remarks (2) in this section for NAT.)

*1 Port number set in the FTP server setting. (Refer to (5) (a) in this section.)

(6) System name setting

Set the system name used for the following. (Up to 32 characters)
• Title of the standard screen (Title bar of the Web browser)
• Name of the e-mail sender
Refer to Appendix 4 (5) for the characters available for the system name.

(7) Network diagnosis setting

Set whether network diagnoses (ping) will be executed or not.

(a) "Execute network diagnoses (ping)."
When this setting is valid, a Ping packet (1 packet) is sent periodically to diagnose the network.
When no response is given from the destination within 20 seconds, a retry is made once. If there is still no response after that, an error is reported.
Network diagnoses are continuously executed during network connection (while X4 is ON).
When this setting is valid, set the sending interval and destination.

(b) Sending interval (10 to 3600s)
Set the sending interval of a Ping packet.
When setting, take account of the load on the network.

(c) Destination
Select the destination of the Ping packet.
1) Gateway
   The Ping packet is sent to the gateway.
   When the dial-up connection is established, it is sent to the server of the Internet service provider.
2) Following external device
   The Ping packet is sent to the specified external device.
   As the external device name, set an IP address or host name.
   Refer to Appendix 4 (2) for the characters available for the external device name.

(8) Automatic network connection setting at start-up

Set whether automatic network connection will be made or not at a start.

Item	Description
No connection to network at start-up.	Network connection/disconnection processing is required when continuous connection is not available. (Refer to Section 5.4)
Automatic connection to network at start-up	The Web server module automatically connects to the network at a start.

POINT

After changing the settings, make sure to click on the "Save" button.
The settings in System setting are updated when the PLC is powered off and then on, or the CPU module is reset.

REMARK

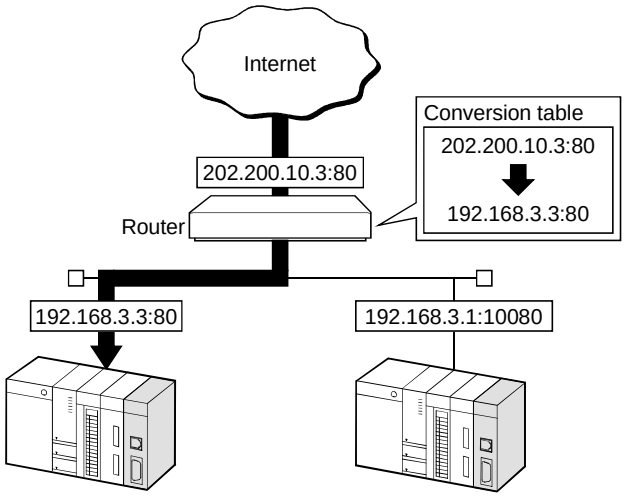
(1) The following table indicates the default IP address of the Web server module. (*1) (*2)

Item	Description
IP address	192.168.3.3
Subnet mask	255.255.255.0

*1 When making initial setting, set the IP addresses of the Web server module and personal computer to the same network address.

*2 Prior to shipment, the Web server module is set as indicated below, including the above default IP address.
- Connecting through LAN or the router.
- Use the default HTTP port number (80).
- Use the default FTP port number (21).
- System name: QJ71WS96
- Do not execute network diagnoses (ping).
- Automatic connection to network at start-up.

(2) NAT is shown below.



・The packet addressed to "202.200.10.3:80" is sent after conversion of the address into "192.163.3.3:80" by the router.

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4.6.4 Dial-up setting

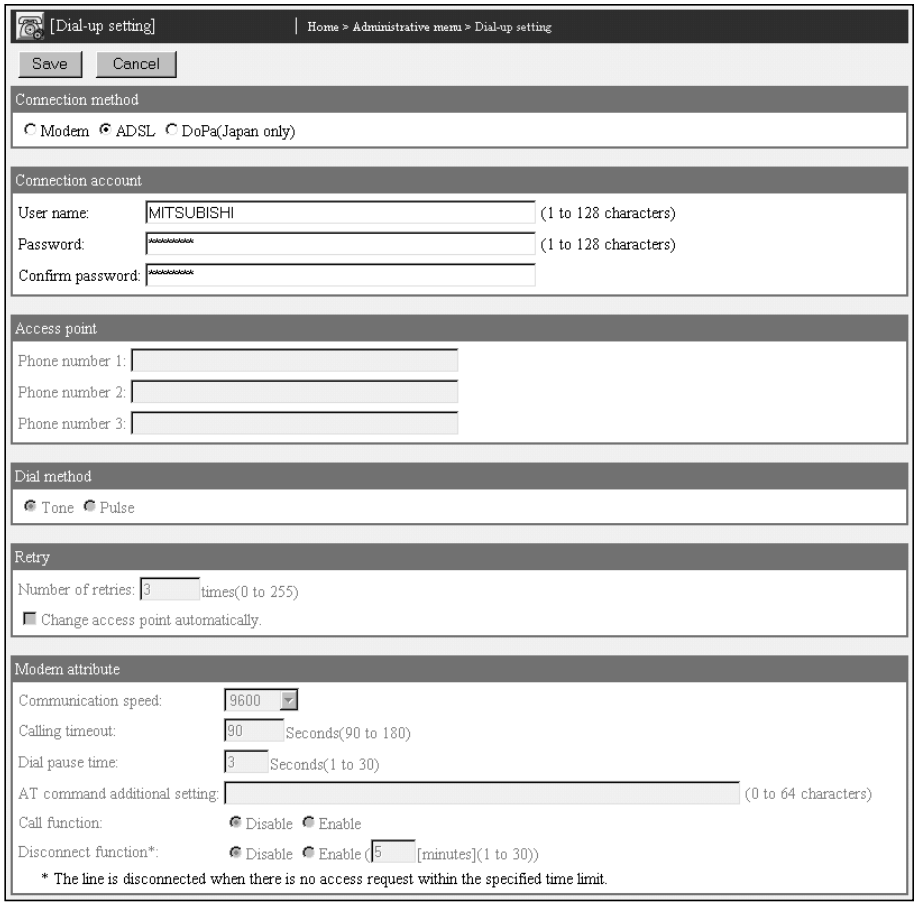
[Setting Purpose]

Make the setting required for the Web server module to connect to the Internet.

[Start Procedure]

[Administrative menu] → " Dial-up setting"

[Setting Screen]



[Setting Item]

Item	Description
Connection method	Sets the connecting method of the Web server module.
Connection account	Sets the account for connecting to the Internet service provider.
Access point	Sets the access point for the Internet service provider.
Dial method	Sets the dialling method.
Retry	Sets the items related to network connection retries.
Modem attribute	Sets the modem attribute.
Save	Saves the settings. The settings are updated when the PLC is powered off and then on, or the CPU module is reset.
Cancel	Discards new data and return to the old setting.

(1) Connection method

Set the connection method of the Web server module.

(a) Select the method of connecting the Web server module to the Internet from Modem or ADSL.

(b) Make the settings of (2) to (6) according to the selected connection method. The items unnecessary for the selected connection method are disabled. Input to the column cannot be made.

(2) Connection account

Set the account for connecting to the Internet service provider.

(a) Set the account data for connecting to the Internet service provider.

1) User name (1 to 128 characters)
Enter the user name (user ID) registered for the connection target Internet service provider.
Refer to Appendix 4 (2) for the characters applicable to the user name.

2) Password (1 to 128 characters)
Enter the password registered for the connection destination Internet service provider.
Refer to Appendix 4 (2) for the characters applicable to the password.

3) Confirm password
Enter the password again to confirm the password.

(b) A contract with an Internet service provider is required prior to Internet connection.
Contact the Internet service provider for the available services and the contract.

POINT
A contract with an Internet service provider is required prior to Internet connection.

(3) Access point

(a) Set the access point (Phone number) for the Internet service provider.
Refer to Appendix 4 (4) for the characters applicable to the Phone number.

(b) Up to three access points of the same Internet service provider can be registered. (*)

* When setting more than one access point, select "Change access point automatically." in Retry.

(4) Dial method

Set the dialling method.

- Tone
- Pulse

(5) Retry

Set the items related to network connection retries.

(a) Number of retries (0 to 255 times)
Set the number of connection request retries when connection to the network fails.

(b) Change access point automatically.
Make this setting when registering more than one access point.
1) The module connections to the access point in due order starting from the Phone number 1.
2) In the case of network connection failure, the Web server module connects to the current access point by the number of retries, and to the next access point.

(6) Modem attribute

Set the specifications of communication between the Web server module and modem.

(a) Communication speed (9600, 19200, 38400, 57600, 115200)
Set the communication speed (bps) according to the modem specifications.

(b) Calling timeout (90 to 180s)
Set the time from when the Web server module side modem has gone off-hook (line-connected) until a carrier from the external device side modem is detected.
When it is not detected, the modem goes on-hook (line-disconnected).

(c) Dial pause time (1 to 30s)
Set the waiting time during a dial pause.

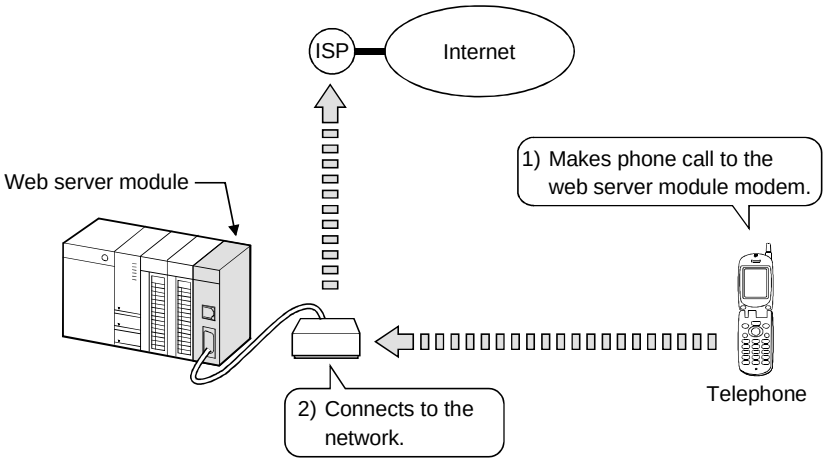
(d) AT command additional setting
1) Set the AT commands to be added.
For the AT commands, refer to the manual of the used modem.
2) The default AT commands for initializing the Web server module side modem are as follows.
- Common initialization command: "ATZ0E1Q0V1&C1&D2&S0S0=0"

Command	Description
Z0	Software reset
E1	With echo back
Q0	With result code
V1	Result code word form
&C1	CD signal follows the carrier of the external device side modem.
&D2	Line is disconnected when the ER signal turns from ON to OFF.
&S0	DR signal always ON
S0=0	Without automatic incoming call

- Dial pause time Command (Common): "S8=n" (n seconds)
- Dial-up command: "ATDT" (Tone), "ATDP" (Pulse)
- Flow control Command: "AT&K3", or "AT&Q3"

(e) CALL function

1) Set whether the CALL function will be enabled or not. (Disable/Enable)
2) When using the CALL function, make a call from the telephone to the Web server module side modem. This allows the Web server module to connect to the network.



(f) Disconnect function (*)

* The line is disconnected when there is no access request within the specified time limit.

1) Set whether the disconnection function will be enabled or not. (Disable/Enable)
2) When the external device makes no access within the set time after connecting the web server module to the network using the disconnection function, the web server module automatically sets the time to disconnect from the network. (1 to 30 minutes) (*1)

*1 No access condition indicates that data is not sent from the personal computer, etc. on the network to the Web server module. However, when the personal computer that sends data periodically exists on the network and unintentional data is sent to the Web server module, the Web server module judges it as access and therefore disconnection may not be made in the preset time.

POINT

(1) When dial-up connection cannot be made normally, make the default operation setting of the switch setting using GX Developer to examine the setting again. Refer to Section 4.7 for the switch setting using GX Developer.
(2) After changing the settings, make sure to click on the "Save" button. The settings in Dial-up setting are updated when the PLC is powered off and then on, or the CPU module is reset.

REMARK

The following table indicates the setting necessity of the dial-up setting for the network connection method.

Item		Network connection method	
		Modem	ADSL
Connection method		○	○
Connection account		○	○
Access point		○	—
Dial method		○	—
Retry		○	—
Modem attribute	Communication speed	○	—
	Calling timeout	○	—
	Dial pause time	○	—
	AT command additional setting	○	—
	CALL function	○	—
	Disconnect function	○	—

○: Required —: Not required

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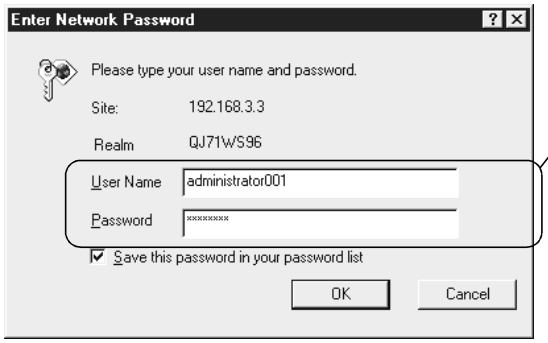
4.6.5 Account setting

[Setting Purpose]

(a) Set the user authentication account that will be confirmed when accessing the Web server module.
When accessing the Web server module, the following user authentication screen ("Enter Network password" screen) appears.



(b) The following access authorities are available for the user account.
(Multiple access authorities can be selected for one account.)
1) Device write authority
2) Tag component write authority
3) Administrator authority
Depending on the given access authority, access to the Web server module is enabled as indicated below.

Access	Access authority			
	Normal user (*1)	Device write authority	Tag component write authority	Administrator authority
Access to monitor screen (standard screen)	○	○	○	○
Access to user screen	○	○	○	○
Read of logging file or event history file by FTP operation	○	○	○	○
Device test from device monitor screen (standard screen)	×	○	×	×
Tag component test from tag data monitor screen (standard screen)	×	×	○	×
Write from user screen (write parts) to tag component	×	×	○	×
Access to administrative menu (standard screen)	×	×	×	○
Read/write of user screen file by FTP operation	×	×	×	○
Read/write of user data file by FTP operation	×	×	×	○
Deletion of logging file or event history file by FTP operation	×	×	×	○

○: Accessible ×: Inaccessible

*1 To the account of the normal user, the device write/tag component write/administrator authority is not given.

[Start Procedure]

[Administrative menu] → "Account setting" (Refer to (1)) → Select the account setting No. to be edited, and click on Edit. → "Edit Screen" (Refer to (2))

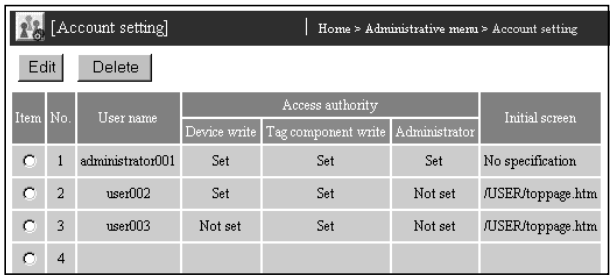
(1) Account setting

(a) Make account setting.
Up to 16 accounts can be set.

(b) Prior to shipment, the following default account is registered for the Web server module as the account setting No. 1. (The default account can be edited.)

- User name : QJ71WS96
- Password : MITSUBISHI
- Access authority : Device write/Tag component write/Administrator
- Initial screen : Standard screen top page (Top page (/index.htm))

[Setting screen]



[Setting item]

Item	Description
Item	Selects the account setting No. to be edited or deleted.
User name	The user name is displayed.
Access authority	The validity of the device write/tag component write/administrator authority of the account is displayed.
Initial screen	The initial screen address for access to the Web server module is displayed. (*) * For "Not specified", the top page of the standard screen is displayed.
Edit	Edits the selected account.
Delete	Deletes the selected account.

Important

(1) After completion of initial setting, make sure to register at least one account with administrator authority, and then connect to the network.
(2) Make sure to delete the default account to prevent illegal access.
(3) The remote password function of the QCPU is not used for the web server module.

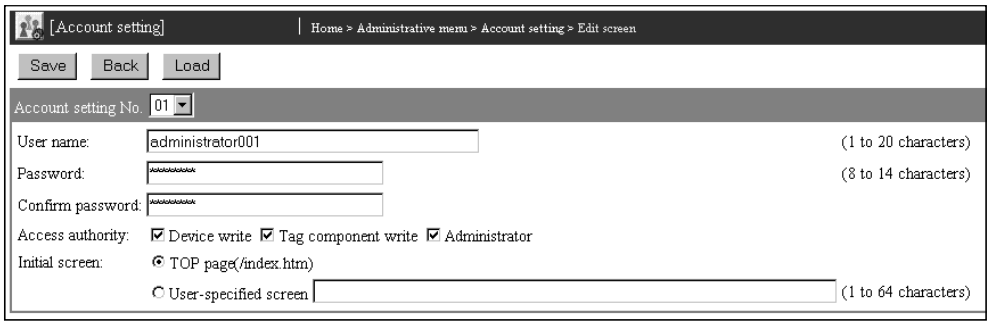
POINT

When access to the Web server module cannot be made, e.g. the registered account has been forgotten, make the default setting by the switch setting of GX Developer and make the account setting again.
Refer to Section 4.7 for the switch setting of GX Developer.

(2) Edit screen

Register the account.

[Setting screen]


[Account setting]
Home > Administrative menu > Account setting > Edit screen
Save
Back
Load
Account setting No. 01
User name: administrator001 (1 to 20 characters)
Password: (8 to 14 characters)
Confirm password:
Access authority: Device write Tag component write Administrator
Initial screen: TOP page(/index.htm)
User-specified screen (1 to 64 characters)

[Setting item]

Item	Description
User name	Sets the user name. (1 to 20 characters)
Password	Sets the password. (8 to 14 characters)
Confirm password	Enters the password again.
Access authority	Selects device write/tag component write/administrator authority.
Initial screen	Sets the initial screen address for access to the Web server module.
Save	Saves the settings. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.
Back / Cancel	Discards the changed setting and return to the Account setting screen.
Select account setting No. and click on Load	Loads the parameters of the No. selected in account setting No. and displays them on the Edit screen.

(a) User name

1) Set the user name. (1 to 20 characters)
There is case sensitivity.
2) Refer to Appendix 4 (2) for the characters applicable to the user name.

(b) Password

1) Set the password. (8 to 14 characters)
There is case sensitivity.
2) Refer to Appendix 4 (2) for the characters applicable to the password.

(c) Confirm password

Enter the password again.

(d) Access authority (Device write/Tag component write/Administrator)

Set the device write/tag component write/administrator authority.

(e) Initial screen

1) The initial screen can be set to be displayed when the address "http://IP address" of the Web server module is specified from the Web browser.
Make this setting when it is desired to change the top page of the standard screen (refer to Section 4.6.1) to a user-specified screen.

[Setting item]

Item	Description
Top page (/index.htm)	Select this item to display the top page of the standard screen.
User-specified screen	Select this item to display the specified user screen.

2) When "User-specified screen" has been selected, set the address of the user screen to be displayed. (1 to 64 characters) (*1) (*2)
- User screen of standard ROM
  (Example) /USER/xxxx.htm
- User screen of Compact Flash card
  (Example) /CF/USER/xxxx.htm

*1 When the specified file does not exist, the top page of the standard screen is displayed.

*2 To display the top page of the standard screen at the time of login using the account for which the user-specified screen is selected, specify "http://IP address/index.htm" as the URL address of the Web browser.

POINT

After changing the settings, make sure to click on the "Save" button.
The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.

(3) Security precautions for the Web server module

The Web server module supports the basic authentication by the user name and password (account setting) and the IP filter function (Refer to Section 4.6.6), however, they cannot prevent illegal access from the outside completely.
When it is required to keep the PLC system safe against illegal access from the outside, the user should also take preventive measures.

It is recommended to use the Web server module paying attention to the following.

(a) To prevent illegal access, it is recommended to use the Web server module on a LAN.
When connecting to the Internet, it is advisable to connect it via a router and use the security function of the router.

(b) If access to the Web server module is not made for dial-up Internet connection, disconnect the Web server module from the network. (Refer to Section 5.4.)

(c) When making the account setting, pay attention to the following points in order to prevent the account information (user name, password) from missing.
   1) Avoid simple setting with alphanumeric characters only. Make sure to add symbols ($&?), etc. to set unpredictable user name and password.
   2) Delete the default account since it may be used to make illegal access.

4.6.6 IP filter setting

[Setting Purpose]

The IP filter function identifies the IP address of the access source to restrict access to the Web server module.

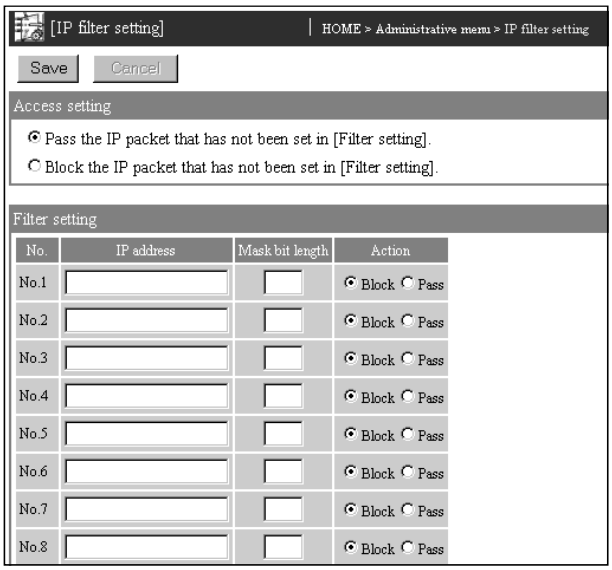
The IP filter function applies to all access of the Web, FTP, etc. to the Web server module.

In IP filter setting, make the setting necessary to use the IP filter function.

[Start Procedure]

[Administrative menu] → "IP filter setting"

[Setting Screen]



[Setting Item]

Item	Description
Access setting	Sets the action to be taken when the received IP packet does not meet the filter setting conditions.
Filter setting	Sets the IP addresses of the access sources and the actions of the IP filter.
Save	Saves the settings. The settings are updated when the PLC is powered off and then on, or the CPU module is reset.
Cancel	Cancels the new settings and returns to the old settings.

(1) Access setting

Set the action (pass/block) to be taken when the received IP packet does not meet all the filter setting conditions.

(2) Filter setting

Set the IP addresses of the access sources and the actions of the IP filter. Up to 32 filter settings can be made.

(a) IP address

Set the IP address of the IP filter target.

(b) Mask bit length
Set the valid bit length of the set IP address. (Setting range: 1 to 32)

(c) Action
Set the action (pass/block) to be taken when the received IP packet meets the filter setting condition.

(Example) When the IP address is set to "210.99.88.00", the action becomes valid in the following IP address range.

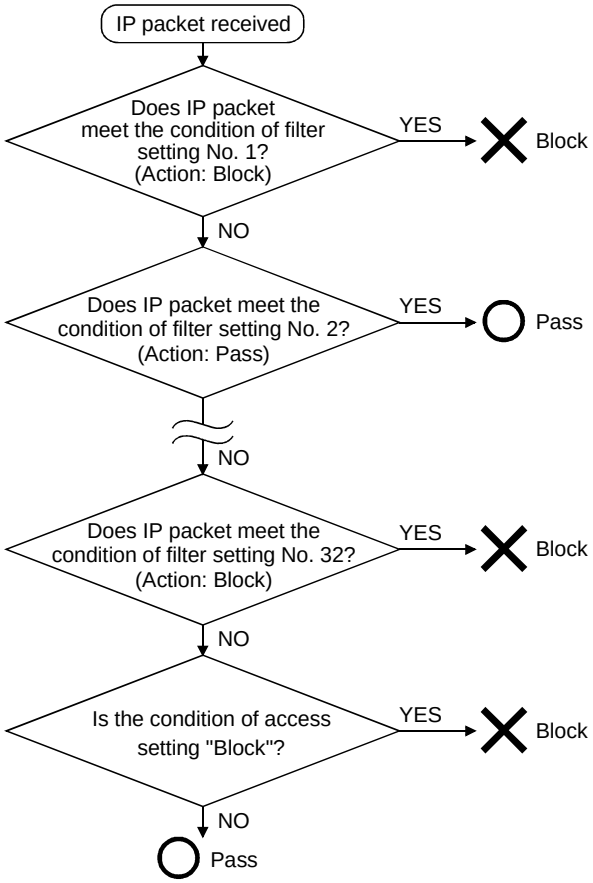
IP address	Mask bit length	Action	IP address range where access is blocked
210.99.88.00	16	Block	210.99.00.00 to 210.99.255.255
	24		210.99.88.00 to 210.99.88.255

(3) IP filter operation

(a) The IP filter is executed in ascending order of the filter setting numbers.

(b) When the received IP packet meets the filter setting condition, the action (pass/block) is executed for the received IP packet.

(c) When the received IP packet does not meet all filter setting conditions, the action (pass/block) set in the access setting is executed.



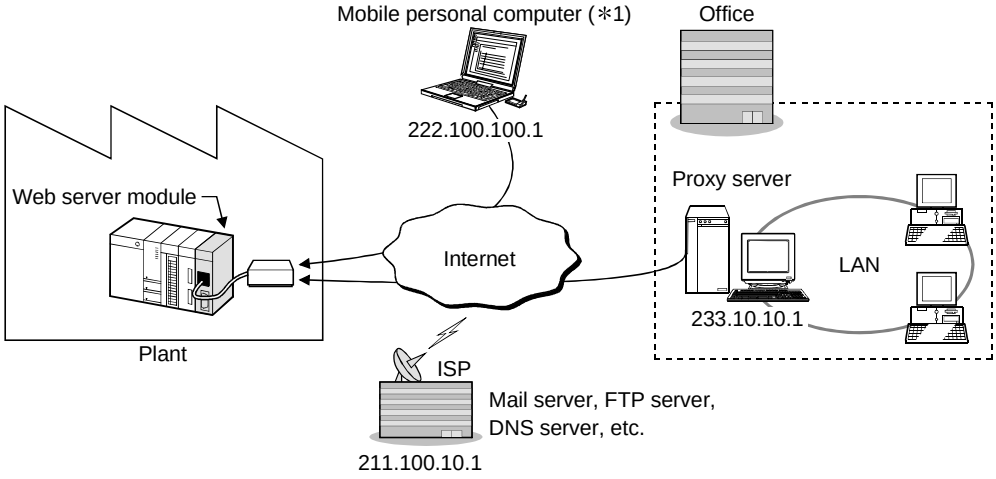
(4) IP filter setting example

When making the IP filter setting, take the precautions given in (5) of this section.

(a) Internet connection

A setting example of enabling access from a mobile personal computer and office is given below.

1) System configuration



2) IP filter setting

Access setting

Pass the IP packet that has not been set in [Filter setting].

Block the IP packet that has not been set in [Filter setting].

Filter setting

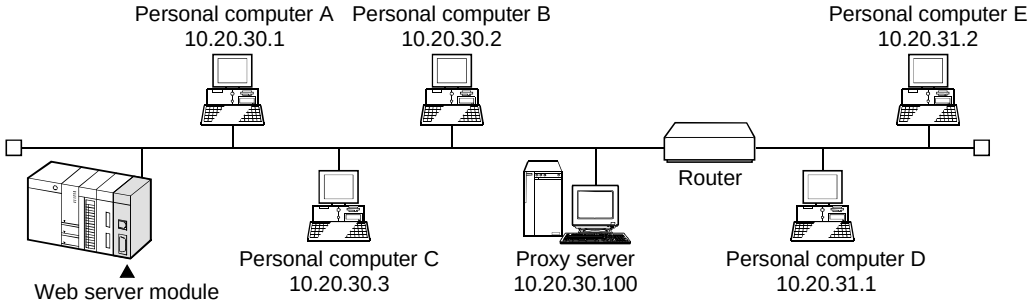
No.	IP address	Mask bit length	Action
No.1	233.10.10.1	1	Block Pass
No.2	222.100.100.1	1	Block Pass
No.3	211.100.10.1	1	Block Pass

*1 A static IP address is required to set the IP filter to the mobile personal computer.

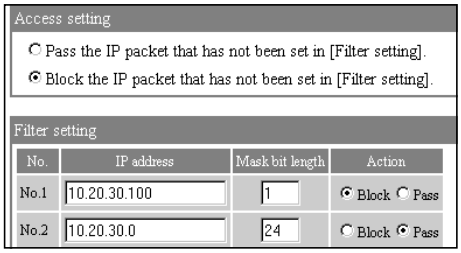
(b) LAN connection

A setting example of enabling access only from personal computers A, B and C (IP addresses 10.20.30.□) is given below.

1) System configuration



2) IP filter setting



(5) Precautions for IP filter setting

(a) When using a mail server, FTP server, DHCP server, DNS server or router, do not set the IP addresses of these devices to "Block".
If it is blocked, communication with the corresponding device is disabled.

(b) When a proxy server exists on the LAN, block the IP address of the proxy server.
When the IP packet from the proxy server is passed, access to the Web server module can be made from any personal computer accessible to the proxy server, independently of the other settings.

(c) When making access from a personal computer on the LAN to the Web server module, do not use a proxy server.

POINT

(1) After changing the settings, make sure to click on the "Save" button.
The settings in IP filter setting are updated when the PLC is powered off and then on, or the CPU module is reset.

(2) Depending on the IP filter settings, access to the Web server module may not be made.
In such a case, make default operation setting by the switch setting of GX Developer, and make the setting again.
Refer to Section 4.7 for the switch setting of GX Developer.

4.6.7 Access target CPU setting

[Setting Purpose]

Sets the connection path to the access target CPU.
When performing device monitor, tag setting, etc., specify the CPU name set in this setting.

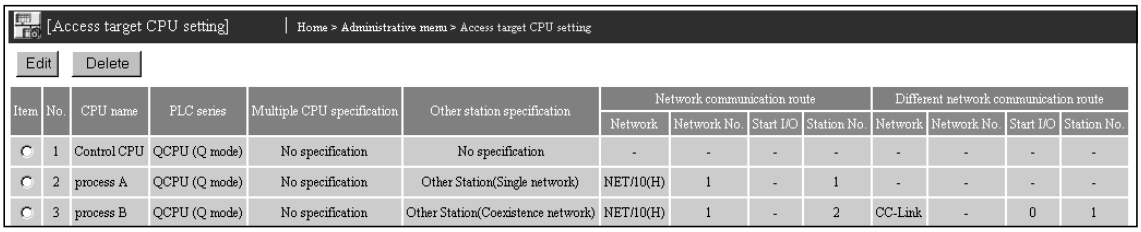
[Start Procedure]

[Administrative menu] → "Access target CPU setting" (Refer to (1)) → Select the access target CPU setting No. to be edited, and click on Edit. → "Edit Screen" (Refer to (2))

(1) Access target CPU setting

Make access target CPU setting.
Up to 64 access target CPUs can be set.
At shipment, the control CPU is registered for the Web server module as the access target CPU setting No. 1.
The registration of the control CPU as the access target CPU No. 1 is fixed and only the CPU name is changeable.

[Setting screen]



Item	No.	CPU name	PLC series	Multiple CPU specification	Other station specification	Network communication route				Different network communication route			
						Network	Network No.	Start I/O	Station No.	Network	Network No.	Start I/O	Station No.
○	1	Control CPU	QCPU (Q mode)	No specification	No specification	-	-	-	-	-	-	-	-
○	2	process A	QCPU (Q mode)	No specification	Other Station(Single network)	NET/10(H)	1	-	1	-	-	-	-
○	3	process B	QCPU (Q mode)	No specification	Other Station(Coexistence network)	NET/10(H)	1	-	2	CC-Link	-	0	1

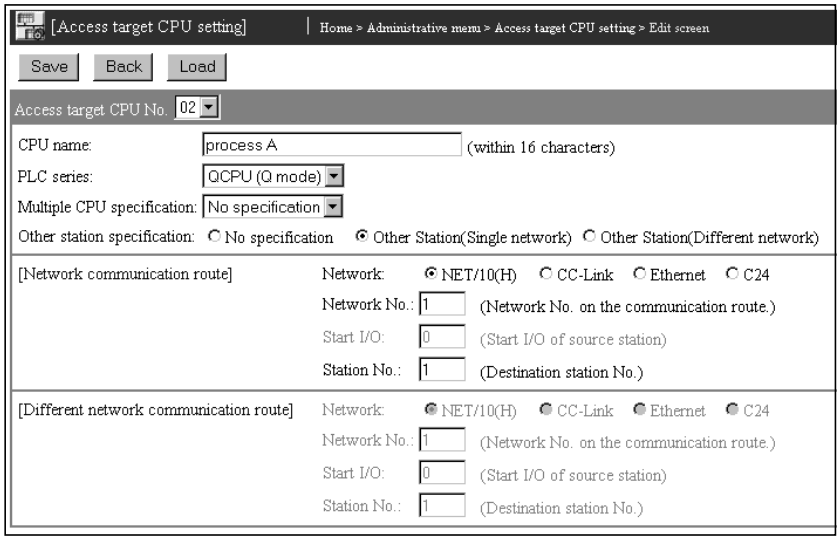
[Setting item]

Item	Description
Item	Selects the access target CPU No. to be edited or deleted.
CPU name	Displays the CPU name.
PLC series	Displays the PLC series of the access target CPU.
Multiple CPU specification	Displays the CPU No. when the access target CPU is in a multiple CPU system.
Other station specification	Displays whether other station is specified or not.
Network communication route, coexistence network communication route	Displays the network type, network No., start I/O address and station No. to be accessed when specifying other station.
Edit	Edits the selected access target CPU.
Delete	Deletes the selected access target CPU.

(2) Edit screen

Register the access target CPU.

[Setting screen]


[Access target CPU setting]
Home > Administrative menu > Access target CPU setting > Edit screen
Save
Back
Load
Access target CPU No. 02
CPU name: process A (within 16 characters)
PLC series: QCPU (Q mode)
Multiple CPU specification: No specification
Other station specification: No specification Other Station(Single network) Other Station(Different network)
[Network communication route]
Network: NET/10(H) CC-Link Ethernet C24
Network No.: 1 (Network No. on the communication route.)
Start I/O: 0 (Start I/O of source station)
Station No.: 1 (Destination station No.)
[Different network communication route]
Network: NET/10(H) CC-Link Ethernet C24
Network No.: 1 (Network No. on the communication route.)
Start I/O: 0 (Start I/O of source station)
Station No.: 1 (Destination station No.)

[Setting item]

Item	Description
CPU name	Sets the access target CPU name. (Within 16 characters)
PLC series	Sets the PLC series of the access target CPU.
Multiple CPU specification	Sets the CPU No. when the access target CPU is in a multiple CPU system.
Other station specification	Sets whether other station is specified or not
Network communication route, coexistence network communication route	Sets the network, network No., start I/O address and station No. to be accessed when other station is specified.
Save	Saves the settings. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.
Back / Cancel	Discards the changed setting and returns to the Access target CPU setting screen.
Select access target CPU setting No. and click on Load	Loads the parameters of the No. selected in access target CPU setting No. and displays them on the Edit screen.

(a) CPU name (within 16 characters)

1) Specify the CPU name of the access target CPU.
2) When performing device monitor, tag setting, etc., specify the CPU name set in this setting.
3) Refer to Appendix 4 (5) for the characters applicable to the CPU name.

(b) PLC series (QCPU (Q mode), QCPU (A mode), QnACPU, ACPU)
Set the PLC series of the access target CPU.

(c) Multiple CPU specification (No choice mode, CPU No.1 to 4)
When the access target CPU is in a multiple CPU system, set the CPU No.
When "No choice mode" has been set, access is made to the control CPU.

(d) Other station specification
Set whether other station is specified or not.
1) No specification
Select this setting when making access to the host CPU.
2) Other station (Single network)
Select this setting when making access to the other station CPU via one type of network, such as only MELSECNET/10 or only Ethernet, or via a network consisting of multi-layer system.
(When a composite system of MELSECNET/10 and Ethernet is used, specify a single network since Ethernet is regarded as MELSECNET/10.)
3) Other station (Coexistence network)
Select this setting when making access to the other station CPU via two types of networks.
Two different types of networks are used in system communications (eg. transmission from MELSECNET/10 to CC-Link or Q series C24 to MELSECNET/10).

(e) Network communication route, Different network communication route
Set the network type, network No., start I/O address and station No. to be accessed.
The setting items change depending on the set network.

POINT
(1) For access to the other station CPU, the routing parameters must also be set in addition to this setting.
For the routing parameters, refer to the manual of the network module.
(2) After changing the settings, make sure to click on the "Save" button.
The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.

(3) Precautions for access target CPU setting

(a) Web server module requires preparatory time to communicate with the access target CPU when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset. Therefore, it may take several minutes before the communication will be available if many access target CPUs are set.
Confirm that the setting update has been completed or the Web server module has been ready (X0 is on), and make access from the personal computer to the Web server module. (*1)
*1 When access is made from the personal computer to the Web server module during preparation of the Web server module, the "Page cannot be displayed" message is returned to the Web browser. Therefore, after the Web server module has been ready, make access from the Web browser again.

(b) Carefully set the "PLC series" of the access target CPU setting.
A wrong "PLC series" has been set, an error occurs in the PLC CPU or module on the route to the access target CPU, and a response time-out error (error code: 0002h) is displayed on the Web server module.

4.7 Intelligent Function Module Switch Setting

[Setting Purpose]

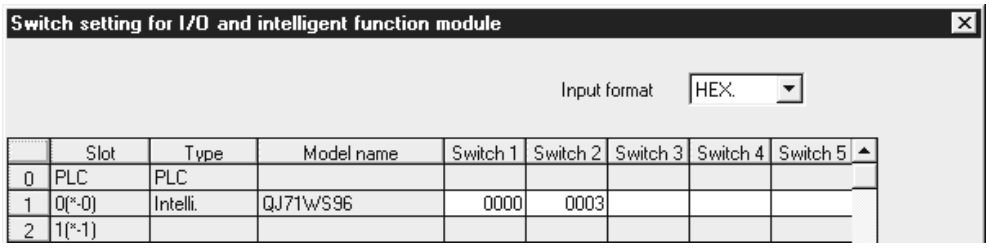
Set the mode, default operation, battery error detection, logging monitor and response monitoring time for Web server module on the "Intelligent function module switch setting" screen.

[Start Procedure]

[GX Developer] → <Project> Window → [Parameter] → [PLC parameter] → <I/O assignment> tab → Switch setting → "Switch setting for I/O and intelligent function module"

Refer to the GX Developer Operating Manual for the screen display method.

[Setting screen]



[Setting item]

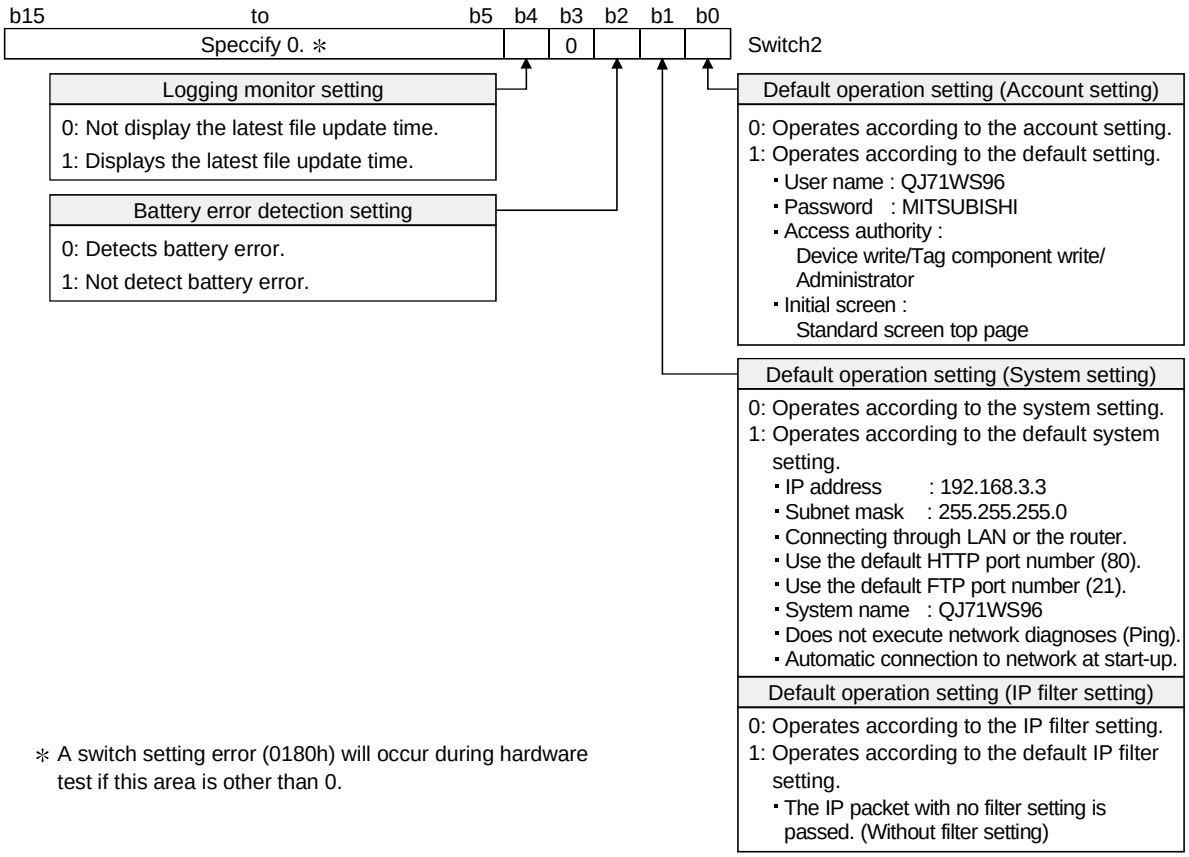
Item	Description
Switch 1	Mode setting
Switch 2	Default operation setting/Battery error detection setting/Logging monitor setting
Switch 3 (lower byte)	Response monitoring time setting
Switch 4 to 5	For system use (Do not set)

(1) Mode setting (Switch 1)

Select the operation mode for Web server module.

Setting Number	Item	Description
0000_H	Online	Normal operation mode
0001_H	Hardware test	Tests the ROM/RAM/switch settings (Refer to Section 4.8.3)
0002_H	CH1 Self-loopback test	Tests the self diagnostics for CH1. (Refer to Section 4.8.1)
0003_H	CH2 Self-loopback test	Tests the self diagnostics for CH2. (Refer to Section 4.8.2)
9999 ($270F_H$)	Module initialization mode	Initializes the module to default setting. (Refer to Section 4.13)

(2) Default operation setting/Battery error detection setting/Logging monitor setting (switch 2)


b15 to b5 b4 b3 b2 b1 b0
Speccify 0. ∗
0
Switch2
Logging monitor setting
0: Not display the latest file update time.
1: Displays the latest file update time.
Battery error detection setting
0: Detects battery error.
1: Not detect battery error.
Default operation setting (Account setting)
0: Operates according to the account setting.
1: Operates according to the default setting.
・User name : QJ71WS96
・Password : MITSUBISHI
・Access authority :
Device write/Tag component write/
Administrator
・Initial screen :
Standard screen top page
Default operation setting (System setting)
0: Operates according to the system setting.
1: Operates according to the default system setting.
・IP address : 192.168.3.3
・Subnet mask : 255.255.255.0
・Connecting through LAN or the router.
・Use the default HTTP port number (80).
・Use the default FTP port number (21).
・System name : QJ71WS96
・Does not execute network diagnoses (Ping).
・Automatic connection to network at start-up.
Default operation setting (IP filter setting)
0: Operates according to the IP filter setting.
1: Operates according to the default IP filter setting.
・The IP packet with no filter setting is passed. (Without filter setting)

∗ A switch setting error (0180h) will occur during hardware test if this area is other than 0.

(a) Default operation setting (bit 0, 1)
For the account setting, system setting and IP filter setting, whether the default setting is enabled or not is set in this setting.

1) Account setting (bit 0)
0 : Operates according to the account setting.
1 : Operates according to the default setting.

2) System setting and IP filter setting (bit 1)
0 : Operates according to the system setting/IP filter setting.
1 : Operates according to the default setting.

POINT

Use the default setting when changing the setting of the Web server module connected with the personal computer on a one-to-one basis.

(b) Battery error detection setting (bit 2)
This setting is provided to determine whether battery error detection is enabled or not while the Web server module is operating without battery. (Refer to Section 4.11.)
0 : Detects battery error.
1 : Not detect battery error.

(c) Logging monitor setting (bit 4)
Whether the latest file update time is displayed or not in the file specification field of the logging monitor is set in this setting. (Refer to Section 6.2.3.)
0 : Not display the latest file update time.
1 : Displays the latest file update time.

POINT

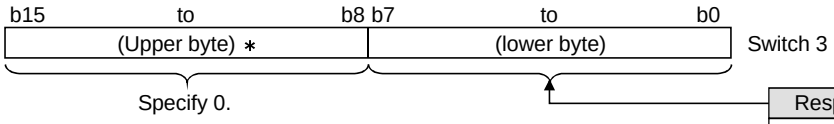
(1) Regardless of the logging monitor setting, the logging file time information can be obtained from the file name. (Refer to Section 6.4.4 (2) (h).)

(2) When the logging monitor setting is "1", longer time will be required to display the logging monitor if there are many logging files saved.

(3) Response monitoring time setting (switch 3 (lower byte))

This is the setting for timeout time (second) from when a module sends a request to the CPU of the accessed device until the CPU responds to it.
Response timeout error will occur if the CPU of the accessed device does not respond to the request after the set time has passed.

Setting range: 15 to 255 (second) (default value: 15 seconds)
Response monitoring time will be automatically default value (15 seconds) if it is not set or set to any of 0 to 14.

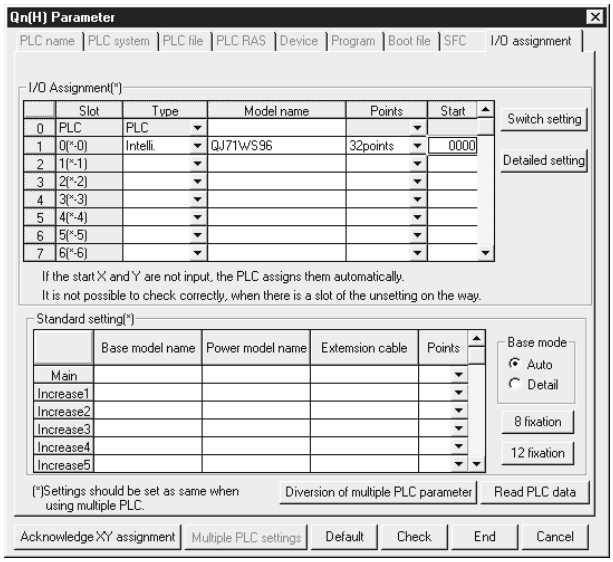


Response monitoring time setting
15 to 255 (seconds) Response monitoring time will be automatically default value (15 seconds) if it is not set or set to any of 0 to 14.

* The upper byte is basically ignored. However, a switch setting error (0180h) will occur during hardware test if the upper byte is other than 0.

[Operation procedure]

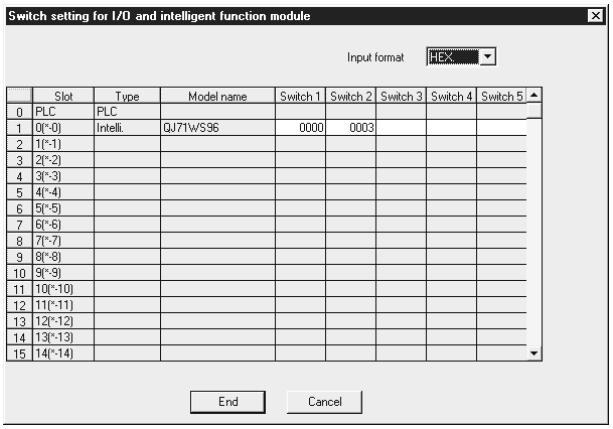
Make setting from the I/O assignment setting screen of GX Developer.



(a) I/O assignment setting screen

Set the following to the slot mounted with the Web server module.

Type	: Select "Intelli.".
Model name	: Enter the model name of the Web server module.
Points	: Select 32 points.
Start	: Enter the head I/O number of the Web server module.
Detailed setting	: Specify the control CPU of the Web server module.



(b) Intelligent function module switch setting screen

Click on the "Switch setting" on the I/O assignment setting screen to display the screen shown on the left, and set Switches.
Setting can be made easily by entering data in hexadecimal number. Enter data after changing the input form into the hexadecimal number.

4.8 Self-diagnostics Function

This section explains the self-diagnostics function designed to check the communication function and hardware of the Web server module

4.8.1 CH1 self-loopback test

Conduct a self-loopback test to check hardware including the communication function of the CH1 (10BASE-T/100BASE-TX interface) of the Web server module.

(1) Operation mode setting for Web server module

(a) In "Switch setting for I/O and intelligent function module" of GX Developer, set the mode to "CH1 Self-loopback test". (Switch 1: 0002_H)

(b) Write the PLC parameters to the PLC CPU.

(2) Execution of CH1 self-loopback test

(a) When a cable has been connected to the CH1, disconnect it.

(b) Set the PLC CPU to a STOP status.

(c) Reset the PLC CPU.

(d) After the PLC CPU is reset, the following CH1 self-loopback test is executed automatically.
This test checks whether data can be communicated in the Web server module.
During the test, the ERR. LED flickers.

(3) Confirmation of CH1 self-loopback test result

(a) Check the CH1 self-loopback test result according to the ERR. LED status.

ERR. LED status	CH1 self-loopback test result
Off	Completed
On	Failed

(b) When the test is completed, set the mode to "Online" in "Switch setting for I/O and intelligent function module" of GX Developer, and reset the PLC CPU. (Switch 1: 0000_H)

(c) When the test has failed, conduct the CH1 self-loopback test again.
If an error occurs again, a possible cause is the hardware fault of the Web server module.
Please consult your local Mitsubishi service center or representative, explaining a detailed description of the problem.

4.8.2 CH2 self-loopback test

Conduct a self-loopback test to check a hardware including the communication function of the CH2 (RS-232 interface) of the Web server module.

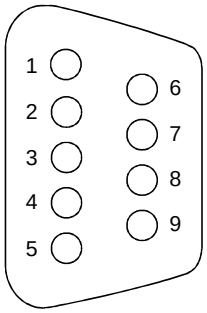
(1) Operation mode setting for Web server module

(a) In "Switch setting for I/O and intelligent function module" of GX Developer, set the mode "CH2 Self-loopback test". (Switch 1: 0003H)

(b) Write the PLC parameters to the PLC CPU.

(2) Execution of CH2 self-loopback test

(a) Connect the cable to the CH2 as shown below.



Pin No.	Signal abbreviation	Cable connection
1	CD(DCD)	
2	RD(RXD)	
3	SD(TXD)	
4	ER(DTR)	
5	SG(GND)	
6	DR(DSR)	
7	RS(RTS)	
8	CS(CTS)	
9	CI(RI)	

(b) Set the PLC CPU to a STOP status.

(c) Reset the PLC CPU.

(d) After the PLC CPU is reset, the following CH2 self-loopback test is executed automatically.
This test repeats data communication and checks the consistency between the send data and receive data.
During the test, the ERR. LED flickers and the CH2 SD/RD is on.

(3) Confirmation of CH2 self-loopback test result

(a) Check the CH2 self-loopback test result according to the ERR. LED status.

ERR. LED status	CH2 self-loopback test result
Off	Completed
On	Failed

(b) When the test is completed, set the mode to "Online" in "Switch setting for I/O and intelligent function module" of GX Developer, and reset the PLC CPU. (Switch 1: 0000H)

(c) When the test has failed, reconnect or rewire the cable correctly and conduct the CH2 self-loopback test again to confirm that the test is completed.

4.8.3 Hardware test

Conduct a test related to the ROM/RAM/switch setting of the Web server module.

(1) Operation mode setting for Web server module

(a) In "Switch setting for I/O and intelligent function module" of GX Developer, set the mode to "Hardware test". (Switch 1: 0001H)

(b) Write the PLC parameters to the PLC CPU.

(2) Execution of hardware test

(a) Set the PLC CPU to a STOP status.

(b) Reset the PLC CPU.

(c) After the PLC CPU is reset, the following hardware test is executed automatically.
During the test, the ERR. LED flickers.

1) ROM check
This test reads the ROM data and conducts sum check

2) RAM check
This test reads the test data written to the RAM and checks the consistency.

3) Switch setting check
This test checks whether the switch settings are within the allowable ranges or not.
However, "Mode setting" test of Switch 1 is not included.

(3) Confirmation of hardware test result

(a) Check the hardware test result according to the ERR. LED status.

ERR. LED status	Hardware test result
Off	Completed
On	Failed

(b) When the test is completed, set the mode to "Online" in "Switch setting for I/O and intelligent function module" of GX Developer, and reset the PLC CPU. (Switch 1: 0000H)

(c) When the test has failed, conduct the hardware test again.
If an error occurs again, a possible cause is the hardware fault of the Web server module.
Please consult your local Mitsubishi service center or representative, explaining a detailed description of the problem.

4.9 Setting/Removal of Compact Flash™ Card and Precautions for Use

This section describes how to set or remove the Compact Flash™ card and precautions for use.

4.9.1 Precautions for using Compact Flash™ card

This section explains precautions for use of the Compact Flash™ card.

(1) Precautions for removal or replacement of Compact Flash™ card

(a) Be sure to stop file access before removing or replacing the Compact Flash™ card. (Refer to Section 4.9.2)

(b) Failure to observe the procedures indicated in Section 4.9.2 may result in erasure of logging data during processing, corruption of data in the Compact Flash™ card during access, or a file system fault.

(c) If a Compact Flash™ card fault has occurred, refer to Section 9.1 (9) and restore the card.

(2) Precautions on diagnostic time of Compact Flash™ card

(a) The Web server module executes diagnosis (including file restoration) of the Compact Flash™ card when:
1) Power is turned OFF and ON, or the CPU module is reset.
2) The Compact Flash™ card is inserted while the power is ON.

(b) The diagnostic time of the Compact Flash™ card is lengthened if many files are stored in the card.
It takes approx. 5 seconds for 100 files, and approx. 10 seconds for 1000 files.

(c) Since the following times may be lengthened due to too many files, delete unnecessary files.
1) Rising time of the Compact Flash™ card setting status. (X1)
2) Web server module's ready time. (Rising time of the Module READY (X0))

(3) Precautions for formatting Compact Flash™ card

(a) Use the formatting function of the Web server module to format the Compact Flash™ card. (Refer to Section 6.10.2.)

(b) Do not format the Compact Flash card™ on Windows® XP/2000.
If it is formatted on Windows® XP/2000 by mistake, recover it according to the manual of the Compact Flash™ card.

(4) Precaution for Compact Flash™ card lifetime (limited number of writes)

The Compact Flash™ card has its own lifetime (the limited number of writes). For details, check the specifications of each product.
Since the lifetime of the Compact Flash™ card generally varies depending on its free space, it is advisable to use the card with sufficient free space.
For the size of the data written to the Compact Flash™ card, refer to Appendix 7.2.

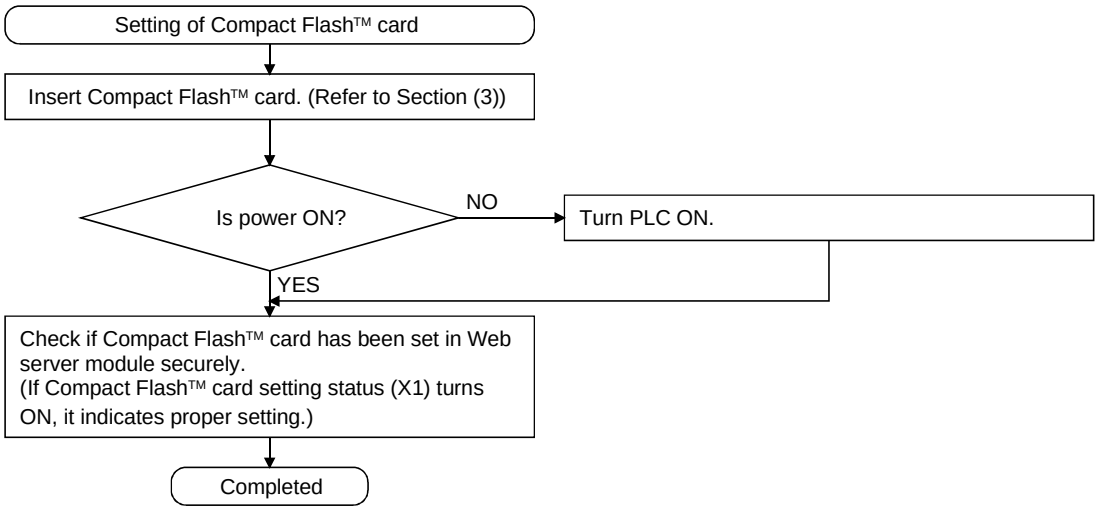
REMARK

When the power is turned off while data are being written to the Compact Flash™ card, the writing will not be completed. However, as the Web server module automatically executes file restoration when powered on again, usually the power can be turned off without performing the file access stop.

4.9.2 Setting/Removal of Compact Flash™ card

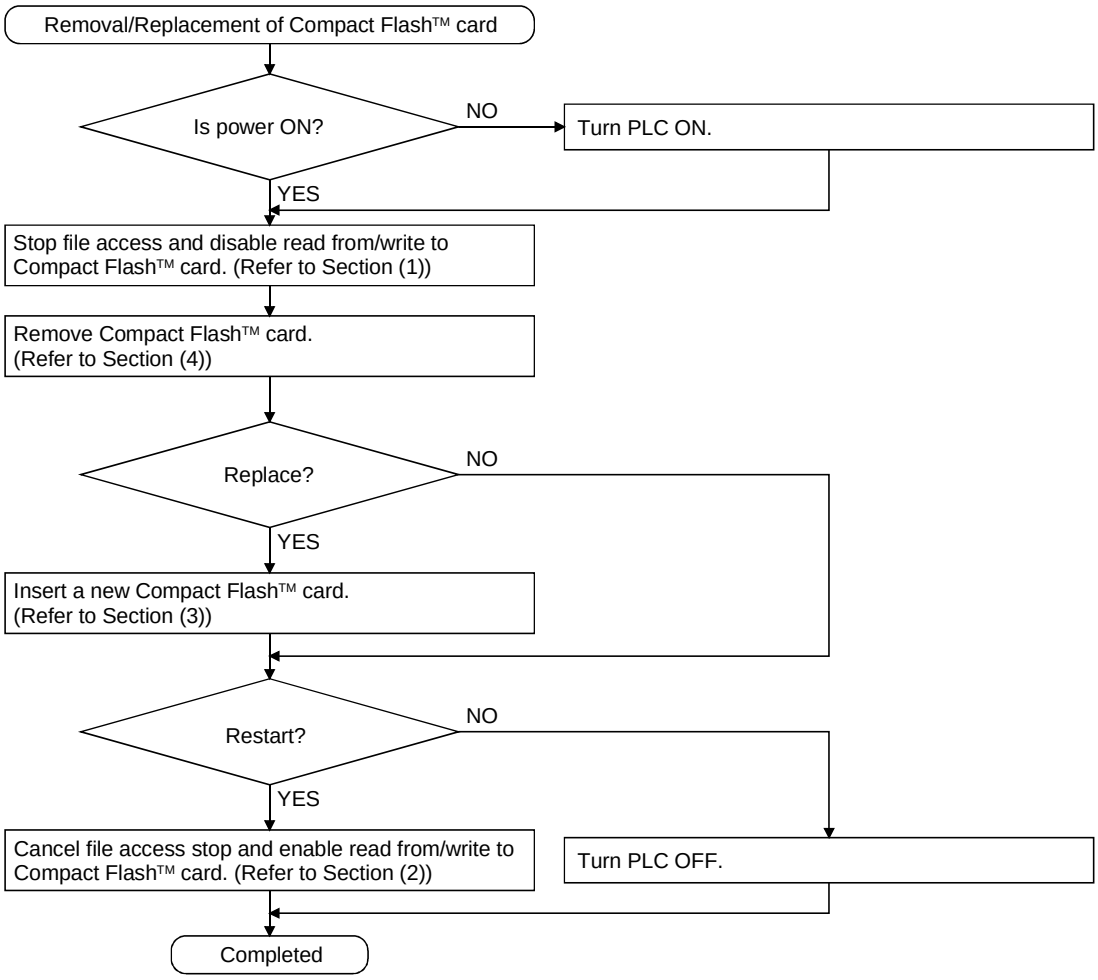
This section explains the setting/removal of the Compact Flash™ card.

[Setting the Compact Flash™ Card]


Setting of Compact Flash™ card
Insert Compact Flash™ card. (Refer to Section (3))
Is power ON?
NO
Turn PLC ON.
YES
Check if Compact Flash™ card has been set in Web server module securely.
(If Compact Flash™ card setting status (X1) turns ON, it indicates proper setting.)
Completed

[Removing or Replacing the Compact Flash™ Card]

Before removing or replacing the Compact Flash™ card, be sure to stop the file access by the following procedures.


Removal/Replacement of Compact Flash™ card
Is power ON?
NO
Turn PLC ON.
YES
Stop file access and disable read from/write to Compact Flash™ card. (Refer to Section (1))
Remove Compact Flash™ card. (Refer to Section (4))
Replace?
NO
YES
Insert a new Compact Flash™ card. (Refer to Section (3))
Restart?
NO
YES
Cancel file access stop and enable read from/write to Compact Flash™ card. (Refer to Section (2))
Turn PLC OFF.
Completed

Important

Failure to observe the above procedure may cause erasure of logging data during processing, corruption of data in the Compact Flash™ card during access, or a file system fault.
For a Compact Flash™ card fault, refer to Section 9.1 (9).

(1) Stopping file access

(a) Stop a file access.

1) Turn File access stop request (Y2) from OFF to ON.

(b) Confirm that file access has stopped.

1) Compact Flash™ card setting status (X1) is OFF.
2) File access status (X2) is ON.
3) Turn File access stop request (Y2) from ON to OFF.

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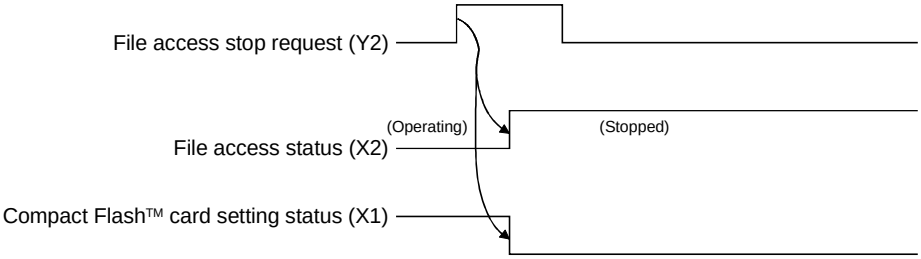


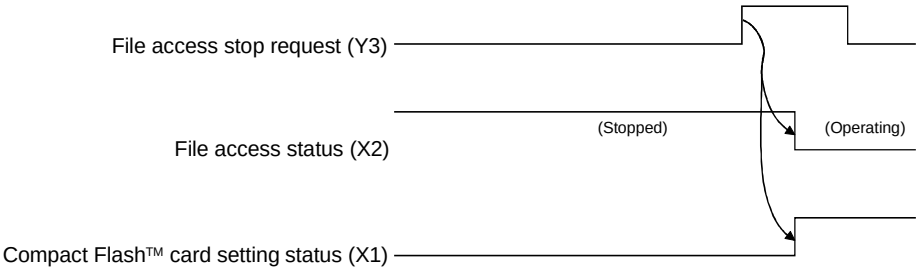
(2) Canceling file access stop status

(a) Cancel the file access stop status.

1) Turn File access stop cancel request (Y3) from OFF to ON.

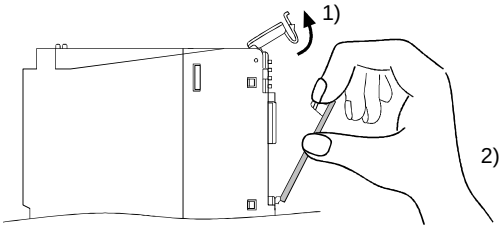
(b) Confirm that the file access stop status has been cancelled.

1) Compact Flash™ card setting status (X1) is ON.
2) File access status (X2) is OFF.
3) Turn File access stop cancel request (Y3) from ON to OFF.



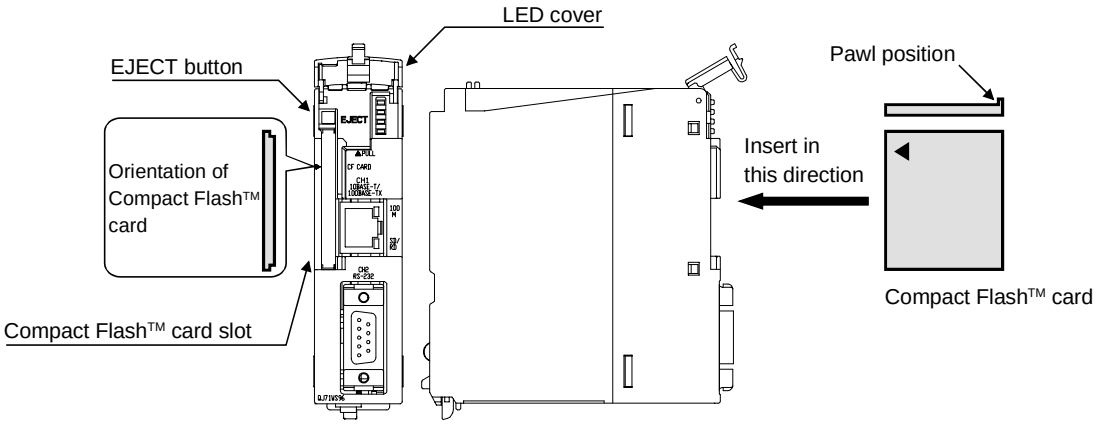
(3) Setting Compact Flash™ card

(a) Open the LED cover, which is situated on the Web server module front, and remove the Compact Flash™ card slot cover.



1) Put your finger at the bottom of the LED cover and lift the LED cover open.
2) Put your finger at the top of the Compact Flash™ card slot cover and then remove it.

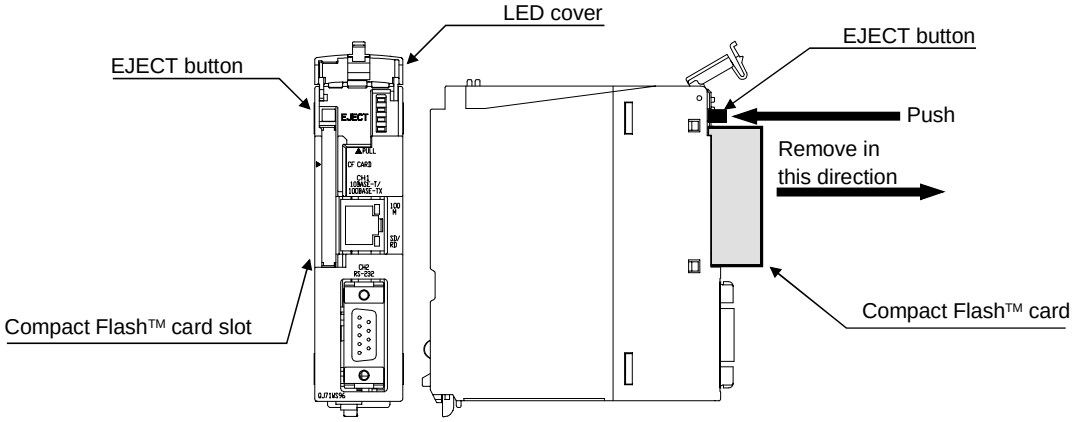
(b) Insert the Compact Flash™ card.
When inserting the Compact Flash™ card into the Web server module, pay attention to the orientation of the Compact Flash™ card.
Push the Compact Flash™ card securely into the slot until it is flush with the EJECT button.



(c) Lower the LED cover until it clicks.
When the Compact Flash™ card is set, the Compact Flash™ card slot cover cannot be attached to the Web server module.
Save the removed Compact Flash™ card slot cover carefully.

(4) Removing Compact Flash™ card

(a) Open the LED cover, which is situated on the Web server module front, and remove the Compact Flash™ card slot cover.



1) Put your finger at the bottom of the LED cover and lift the LED cover open.
2) When removing the Compact Flash™ card from the Web server module, press the EJECT button to push the Compact Flash™ card out.

(b) Attach the Compact Flash™ card slot cover and close the LED cover.

1) Attach the Compact Flash™ card slot cover.
When the Compact Flash™ card is not set, attach the Compact Flash™ card slot cover.
2) Lower the LED cover until it clicks.

4.10 Mounting and Replacement of Battery

This section explains the mounting and replacement of the battery.

4.10.1 Battery specifications

The following table provides the specifications of the battery for the Web server module.

Item \ Model	Q6BAT
Type	Manganese dioxide lithium primary battery
Initial voltage	3.0V
Nominal current	1800mAh
Storage life	Actual life of 5 years (room temperature)
Total power failure time	Refer to Section 4.10.3
Application	For file protection

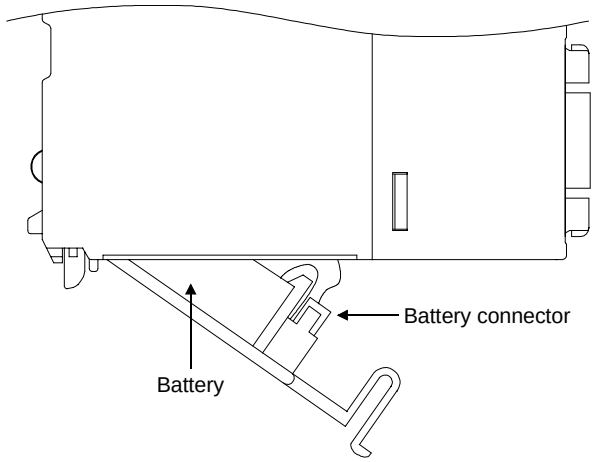
4.10.2 Mounting of battery

At shipment, the battery connector is not mounted to the battery of the Web server module. Before using the Web server module, connect the battery connector.

(1) Open the cover at the bottom of the Web server module.

(2) Confirm that the battery has been mounted correctly.

(3) Insert the connector attached to the battery to the connector pin on the case.



Important

When operating the Web server module without the battery, make sure to perform the shut-down operation described in Section 4.11.
Failure to observe the above procedure may cause erasure of logging data during processing, corruption of data in the standard ROM drive/Compact Flash™ card during access, or a file system fault.

4.10.3 Battery replacement

This section explains the battery replacement of the Web server module.
The battery of the Web server module is used for file protection.
It is required to replace the battery when the voltage of the Web server module battery has dropped.

(1) Checking the Web server module for a battery voltage drop

(a) Check for a battery voltage drop in the battery status area (buffer memory: 7).

(b) The following results at battery error.
1) "1 (ON)" is written to the battery status area (buffer memory: 7).
2) The ERR. LED turns on, and ERR. LED status (X10) and other error (X1C) turn on.

The file contents will not be erased as soon as the battery error occurs, but may be erased if the battery error occurrence is overlooked.

(c) Finish battery replacement while the total of the latch time after Battery status area has turned on is within the specified time.

(2) Web server module battery (Q6BAT) life

(a) The following table shows the Web server module battery life.

Energization time ratio ＊1	Battery life		
	Guaranteed value (MIN) ＊2	Value in actual use (TYP) ＊3	Guaranteed time after battery error occurrence ＊4
0%	26,000hr 3.04 years	43,800hr 5 years	1,500hr 62 days
30%	37,142hr 4.34 years	43,800hr 5 years	1,500hr 62 days
50%	43,800hr 5 years	43,800hr 5 years	1,500hr 62 days
70%	43,800hr 5 years	43,800hr 5 years	1,500hr 62 days
100%	43,800hr 5 years	43,800hr 5 years	1,500hr 62 days

＊1 The energization time ratio denotes the ratio of power-on time in a day (24 hours).
(When power is on for 12 hours and off for 12 hours, the energization time ratio is 50%.)

＊2 The guaranteed value assumes that the storage ambient temperature is -25 to 75℃(operating ambient temperature is 0 to 55℃).

＊3 The value in actual use assumes that the storage ambient temperature is 40℃ (operating ambient temperature is 25℃).

＊4 In either of the following states, the guaranteed time after power-off is 3 minutes.
- The battery connector is disconnected.
- The battery lead wire is broken.

(b) The battery (Q6BAT) life is 5 years when it is used without connecting to the Web server module.

(c) Though the data is retained within the specified time after Battery status area (buffer memory: 7) has turned on, replace the battery as soon as possible.
However, it is recommended to replace the battery periodically according to the usage status, even when the battery error has not yet occurred.

Important

Failure to replace the battery after battery error occurrence may cause erasure of logging data, corruption of data in the standard ROM drive/Compact Flash™ card during access, or a file system fault.

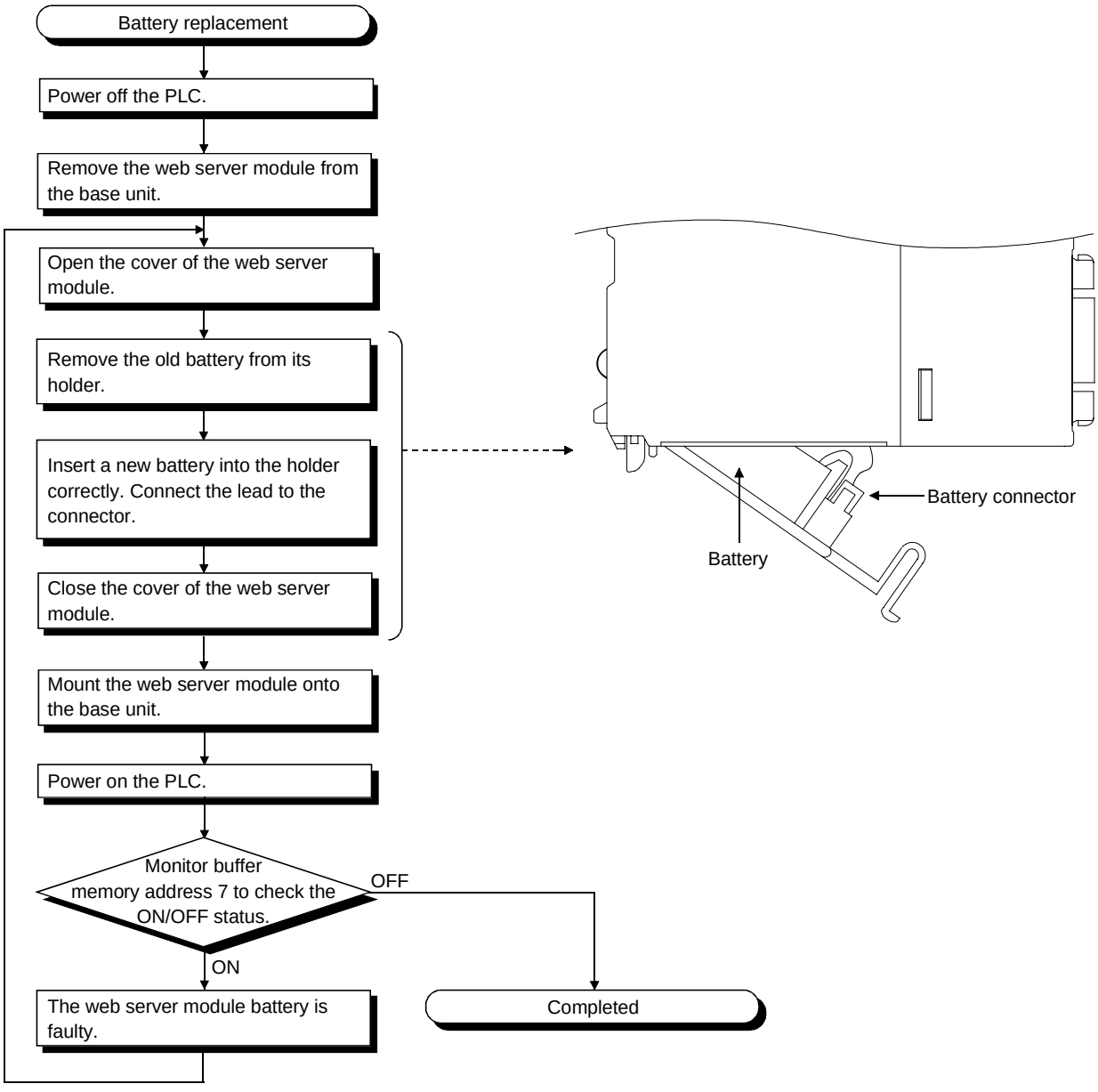
(3) Web server module battery replacement

When the Web server module battery has been exhausted, replace the battery with a new one according to the procedure shown below.
The PLC must be powered on for 10 minutes or more before removing the battery.

Even if the battery is removed, the memories are backed up by the capacitor for a while. However, if the replacement time exceeds the limit specified in the table below, data stored in the memories may be erased. To prevent this, replace the battery quickly.

Backup time by capacitor

Backup time by capacitor [min]
3


Battery replacement
Power off the PLC.
Remove the web server module from the base unit.
Open the cover of the web server module.
Remove the old battery from its holder.
Insert a new battery into the holder correctly. Connect the lead to the connector.
Close the cover of the web server module.
Mount the web server module onto the base unit.
Power on the PLC.
Monitor buffer memory address 7 to check the ON/OFF status.
OFF
ON
The web server module battery is faulty.
Completed
Battery connector
Battery

4 - 58

4.11 Operation without Battery Being Mounted

This section explains the operation without the battery being mounted.

(1) Shut-down operation required when powering off during no battery operation

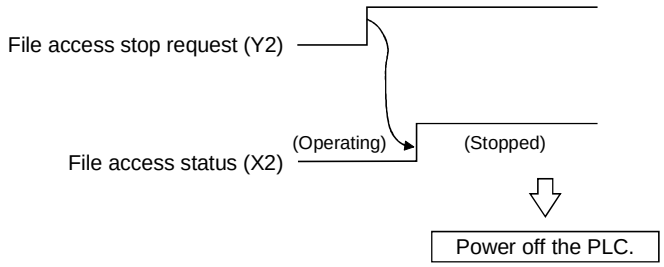
If the file protection battery is not mounted on the Web server module, make sure to perform shut-down operation at power-off of the PLC.
If the Web server module is powered off when the battery is not mounted, saved data such as the setting files and logging data being processed will be lost

[Operating procedure]

(a) Stop a file access.
(Turn File access stop request (Y2) from OFF to ON.)

(b) Confirm that file access has stopped.
(File access status (X2) is ON.)

(c) Power off the PLC.



Important

Failure to observe the above procedure may cause erasure of logging data during processing, corruption of data in the standard ROM drive/Compact Flash™ card during access, or a file system fault.

(2) Making battery error undetected during no battery operation

(a) A battery error occurs when the file protection battery is not mounted on the Web server module.
1) "1 (ON)" is written to the battery status area (buffer memory: 7).
2) The ERR. LED turns on, and ERR. LED status (X10) and Other error (X1C) turn on.

(b) By turning "ON" Battery error detection setting (Switch 2 (Bit 2)) in the switch setting of GX Developer, a battery error can be made undetected.
Refer to Section 4.7 for the switch setting of GX Developer.

4.12 Removing Battery for Storage

When storing the Web server module with no battery mounted, make sure to perform shut-down operation, then power off the PLC, and remove the battery.

Important

Failure to observe the following procedure may cause erasure of logging data during processing, corruption of data in the standard ROM drive/Compact Flash™ card during access, or a file system fault.

[Removing procedure]

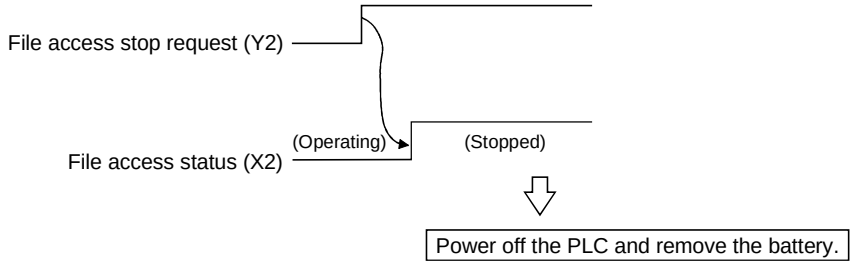
(a) Mount the PLC CPU and Web server module on the base unit and power on.

(b) Stop a file access.
(Turn File access stop request (Y2) from OFF to ON.)

(c) Confirm that file access has stopped.
(File access status (X2) is ON.)

(d) Power off the PLC.

(e) Remove the battery from the Web server module.



4 - 60

4.13 Returning the Web Server Module to the Default Setting

The Web server module stores and manages the setting information, logging data, user HTML, event history, etc. as files in the standard ROM.
The operation described in this section initializes the files stored in the Web server module to return the Web server module to the default setting.
In the module initialization mode, access cannot be made by the Web browser.

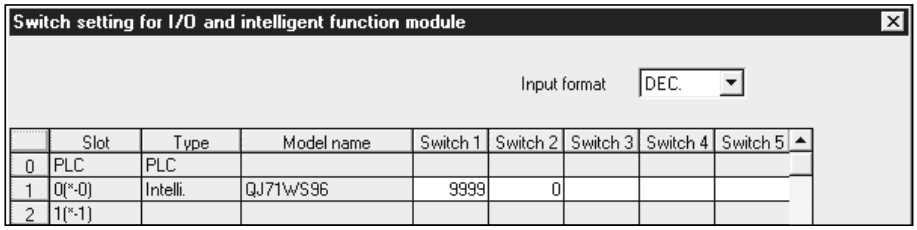
(1) Processings for module initialization (to default setting)

The following table explains the processings performed during the operation in (2) of this section.
Refer to Appendix 3 for the directory structure of the Web server module.

Item	Description
Restore file system	Restores the file system for the standard ROM drive.
Setting file initialization	Returns the current set file to the default settings.
Logging file delete	Deletes all logging files.
Event history file delete	Deletes all event history files.
User HTML file delete and sample file restoration	Deletes all user HTML files. Restores the sample files stored prior to shipment.

(2) Procedure to return the Web server module to the default setting

(a) Set to the module initialization mode in the switch setting of GX Developer. (Set "9999 (Decimal)" to Switch 1.)
Refer to Section 4.7 for the switch setting of GX Developer.



(b) After writing the PLC parameters to the PLC CPU, power off the PLC and then on or reset the CPU module.
"1" is stored into the module initialization request area (buffer memory: 9999). (In the module initialization mode)

(c) Writing "2" to the module initialization request area (buffer memory: 9999) of the buffer memory executes the initialization processing of the Web server module.

(d) The following results when the module initialization processing is completed.
1) When the processing is normally completed, "3" is stored into the module initialization request area.
2) When the processing has failed, other than "3" is stored into the module initialization request area. (*)

* Possible cause for processing failure in this operations is the system file corruption in the standard ROM drive or an unrestorable file system fault.
Please consult your local Mitsubishi service center or representative, explaining a detailed description of the problem.

POINT

The module initialization request of the buffer memory is enabled only when "Mode Setting" of the switch setting is the module initialization mode.

5 CONNECTING WEB SERVER MODULE TO NETWORK

This chapter explains procedures for connecting the Web server module to the network by LAN/dial-up connection and procedures for connecting and disconnecting it to/from the network for non-continuous connection.

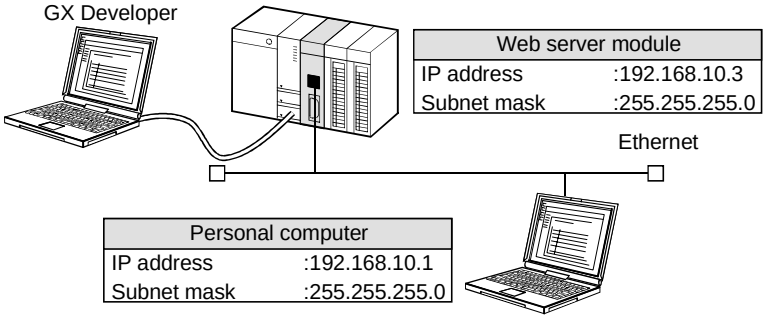
5.1 Network Connection through LAN

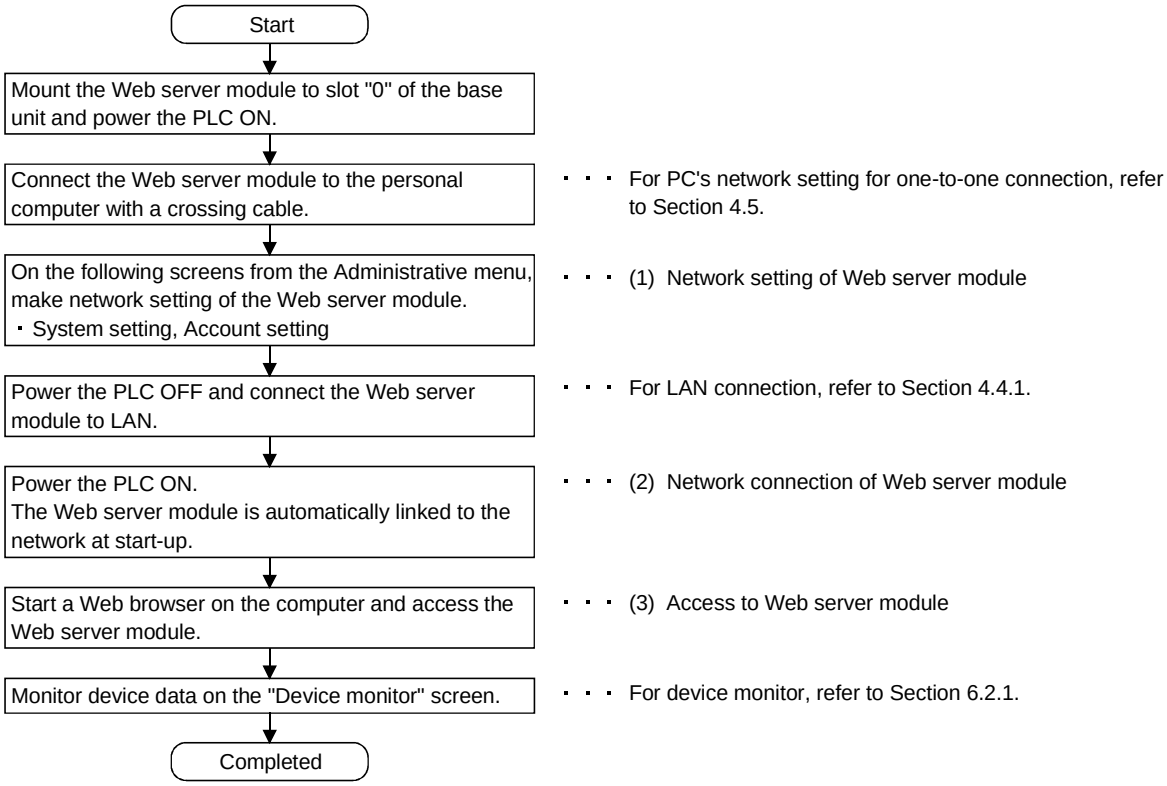
This section explains the case where the Web server module is connected to the LAN-connected network.

5.1.1 Access procedure when using static IP address

The following shows how to access from the external device to the PLC CPU when a static IP address is assigned to the Web server module.

[System configuration for LAN connection]




Start
Mount the Web server module to slot "0" of the base unit and power the PLC ON.
Connect the Web server module to the personal computer with a crossing cable.
For PC's network setting for one-to-one connection, refer to Section 4.5.
On the following screens from the Administrative menu, make network setting of the Web server module.
・System setting, Account setting
(1) Network setting of Web server module
Power the PLC OFF and connect the Web server module to LAN.
For LAN connection, refer to Section 4.4.1.
Power the PLC ON.
The Web server module is automatically linked to the network at start-up.
(2) Network connection of Web server module
Start a Web browser on the computer and access the Web server module.
(3) Access to Web server module
Monitor device data on the "Device monitor" screen.
For device monitor, refer to Section 6.2.1.
Completed

(1) Network setting of Web server module

(a) Make setting to connect the Web server module to the network.

(b) From the Administrative menu, set as follows
(For other than the following settings, the default values will be used.):

[Administrative menu] → "System setting" (Refer to 1)) → "Account setting" (Refer to 2))

1) System setting (Refer to Section 4.6.3)

Item	Set value
Network type setting	Select "Connecting through LAN or the router.".
IP address setting	Select "Use the following IP address.". • IP address : 192. 168. 10. 3 • Subnet mask : 255. 255. 255. 0
Automatic network connection setting at start-up	Select "Automatic connection to network at start-up.".

2) Account setting (Refer to Section 4.6.5)

Item	Set value
Account setting No. 1	Enter the following setting for the accounting setting No. 1. (Delete the default account.) • User name : administrator001 • Password : (example) QJ71WS96ADMIN • Confirm password : (example) QJ71WS96ADMIN

POINT

After changing the setting, make sure to click on the "Save" button.
The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset. (*)
* Note that the setting of the System setting is not updated even if the "Update" button is clicked.

(2) Network connection of Web server module

(a) Since "Automatic connection to network at start-up." is set in the automatic network connection setting at start-up on the "System setting" screen, the Web server module automatically makes network connection at start-up.

(b) Using GX Developer, confirm the following connection status of the Web server module to the network with input signals of the buffer memory and the PLC CPU.

1) Module READY (X0) is on.
2) Network connection status (X4) is on.
3) IP address and subnet mask storage areas in the network connection status area
   • IP address (buffer memory: 55 to 56)
   • Subnet mask (buffer memory: 57 to 58)

(c) When connection to the network fails, connection error (X19) turns on and an error code is stored into the connection error code area (buffer memory: 30).
Take corrective measures according to the troubleshooting.

POINT
In the network connection status area (buffer memory: 28 to 69), the current network connection status of the Web server module can be confirmed.

(3) Access to Web server module

(a) Start a Web browser on the personal computer and enter the Web server module address set in the System setting.
IP address : 192. 168. 10. 3
Subnet mask : 255. 255. 255 .0

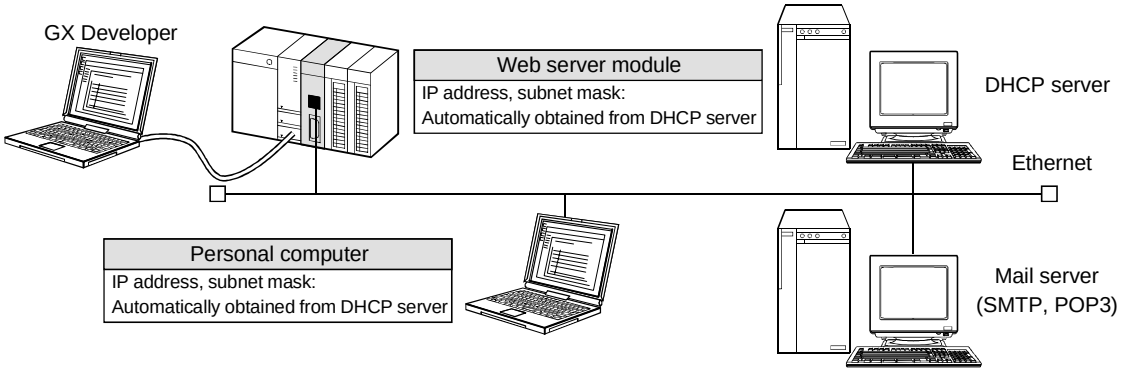
(b) When the user authentication screen is displayed at the time of access to the Web server module, enter the account. (Setting in (1) 2))
User name : administrator001
Password : (example) QJ71WS96ADMIN

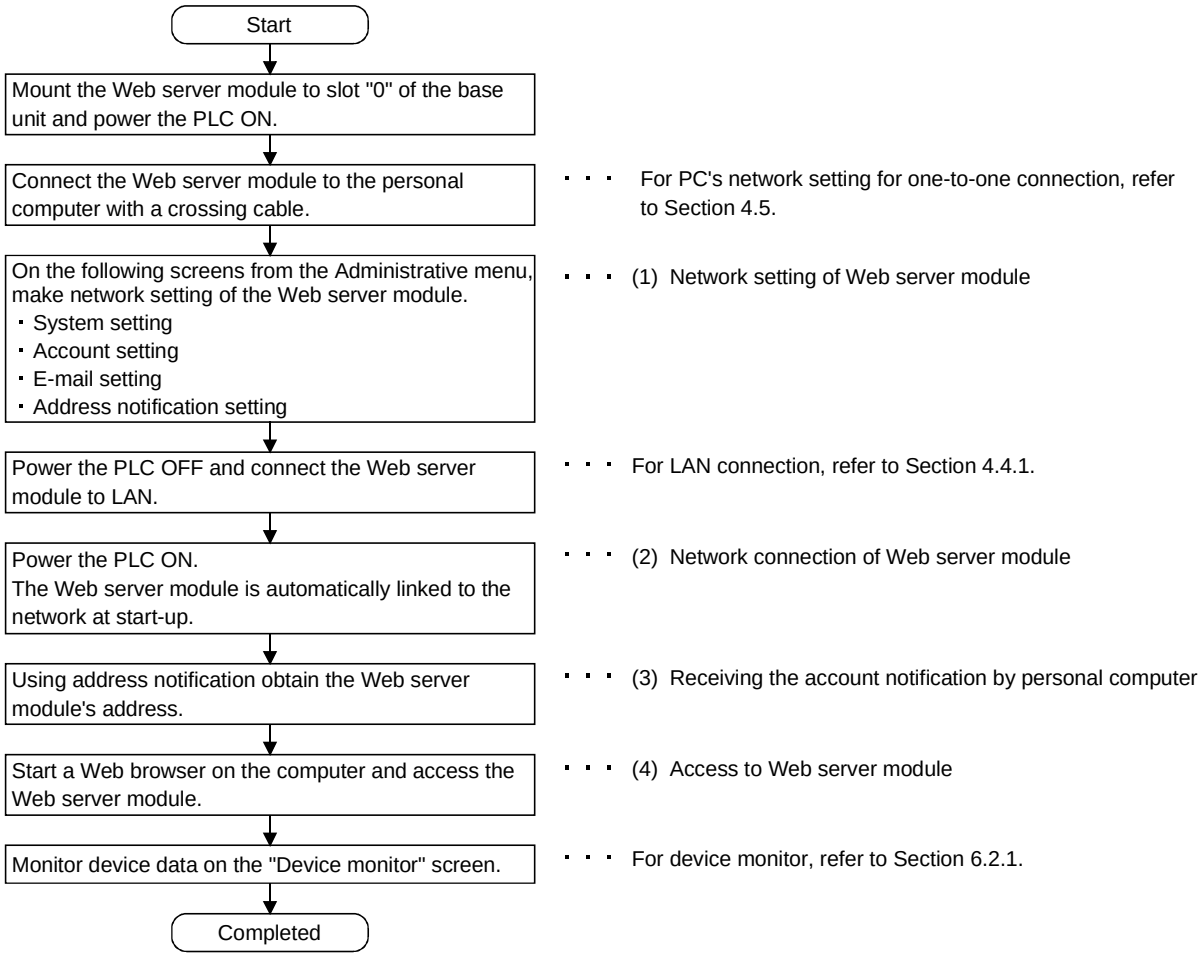
(c) The standard screen is displayed in the Web browser.

5.1.2 Access procedure when obtaining IP address from DHCP server

The following shows the procedure for access from the external device to the PLC CPU when an IP address for the Web server module is obtained from the DHCP server.

[System configuration for LAN connection]




Start
Mount the Web server module to slot "0" of the base unit and power the PLC ON.
Connect the Web server module to the personal computer with a crossing cable.
For PC's network setting for one-to-one connection, refer to Section 4.5.
On the following screens from the Administrative menu, make network setting of the Web server module.
・System setting
・Account setting
・E-mail setting
・Address notification setting
(1) Network setting of Web server module
Power the PLC OFF and connect the Web server module to LAN.
For LAN connection, refer to Section 4.4.1.
Power the PLC ON.
The Web server module is automatically linked to the network at start-up.
(2) Network connection of Web server module
Using address notification obtain the Web server module's address.
(3) Receiving the account notification by personal computer
Start a Web browser on the computer and access the Web server module.
(4) Access to Web server module
Monitor device data on the "Device monitor" screen.
For device monitor, refer to Section 6.2.1.
Completed

(1) Network setting of Web server module

(a) Make setting to connect the Web server module to the network.

(b) From the Administrative menu, set as follows
(For other than the following settings, the default values will be used.):

[Administrative menu] → "System setting" (Refer to 1)) → "E-mail setting" (Refer to 2)) → "Address notification setting" (Refer to 3)) → "Account setting" (Refer to 4))

1) System setting (Refer to Section 4.6.3)

Item	Set value
Network type setting	Select "Connecting through LAN or the router.".
IP address setting	Select "Obtain an IP address automatically.".
DNS server setting	Select "Obtain a DNS server address automatically.".
Automatic network connection setting at start-up	Select "Automatic connection to network at start-up.".

2) E-mail setting (Refer to Section 6.6.3)

Item	Set value
Send e-mail account setting	Enter the e-mail setting of the Web server module. • SMTP server name : (example) mailserver@****.****.ne.jp • E-mail address (From:) : (example) mailaddress@****.****.ne.jp • User name : (example) mitsubishi@****.****.ne.jp • Password : (example) MITSUBISHI • Confirm password : (example) MITSUBISHI
E-mail address (To:) setting	Enter an e-mail address (To:) of the personal computer. • No. 1 : (example) pcmailaddress@****.****.ne.jp

3) Address notification setting (Refer to Section 6.9.2)
[IP address setting]

Item	Set value
Notification IP address	• Select "Notify the IP address set in the "System setting" screen.". • Select "Notify the HTTP port number set in the "System setting" screen.".

[E-mail notification setting]

Item	Set value
IP address notification	• Select "Notify an IP address at network connection". • Select "E-mail address (TO:) No. 1" as the destination of IP address notification.

4) Account setting (Refer to Section 4.6.5)

Item	Set value
Account setting No. 1	Enter the following setting for the accounting setting No. 1. (Delete the default account.) • User name : administrator001 • Password : (example) QJ71WS96ADMIN • Confirm password : (example) QJ71WS96ADMIN

POINT
After changing the setting, make sure to click on the "Save" button. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset. (*) * Note that the setting of the System setting is not updated even if the "Update" button is clicked.

(2) Network connection of Web server module

(a) Since "Automatic connection to network at start-up." is set in the automatic network connection setting at start-up on the "System setting" screen, the Web server module automatically makes network connection at start-up.

(b) Using GX Developer, confirm the following connection status of the Web server module to the network with input signals of the buffer memory and the PLC CPU.

1) Module READY (X0) is on.
2) Network connection status (X4) is on.
3) IP address and subnet mask storage areas in the network connection status area
   - IP address (buffer memory: 55 to 56)
   - Subnet mask (buffer memory: 57 to 58)

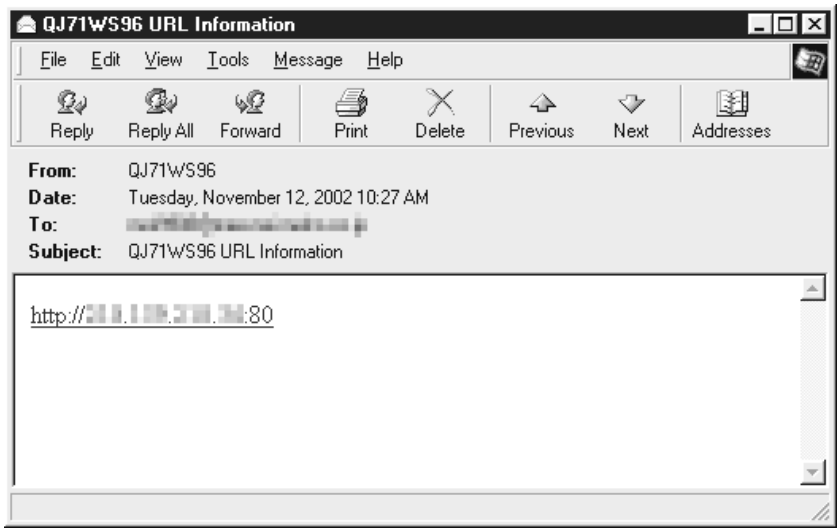
(c) When connection to the network fails, connection error (X19) turns on and an error code is stored into the connection error code area (buffer memory: 30).
Take corrective measures according to the troubleshooting.

POINT
In the network connection status area (buffer memory: 28 to 69), the current network connection status of the Web server module can be confirmed.

(3) Receiving the account notification by the personal computer

By the address notification setting, the URL of the Web server module is sent by e-mail to the destination e-mail address.

(Example) In the case of Microsoft© Corporation's Outlook© Express 5.5


QJ71WS96 URL Information
File Edit View Tools Message Help
Reply Reply All Forward Print Delete Previous Next Addresses
From: QJ71WS96
Date: Tuesday, November 12, 2002 10:27 AM
To:
Subject: QJ71WS96 URL Information
http://[redacted]:80

(4) Access to Web server module

(a) Start a Web browser on the personal computer and enter the Web server module address obtained by the address notification function.

(b) When the user authentication screen is displayed at the time of access to the Web server module, enter the account. (Setting in (1) 4))
User name : administrator001
Password : (example) QJ71WS96ADMIN

(c) The standard screen is displayed in the Web browser.

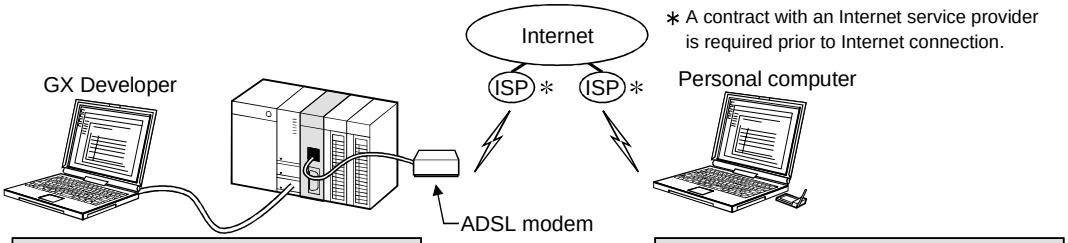
5.2 Network Connection by Dial-up (Modem, ADSL)

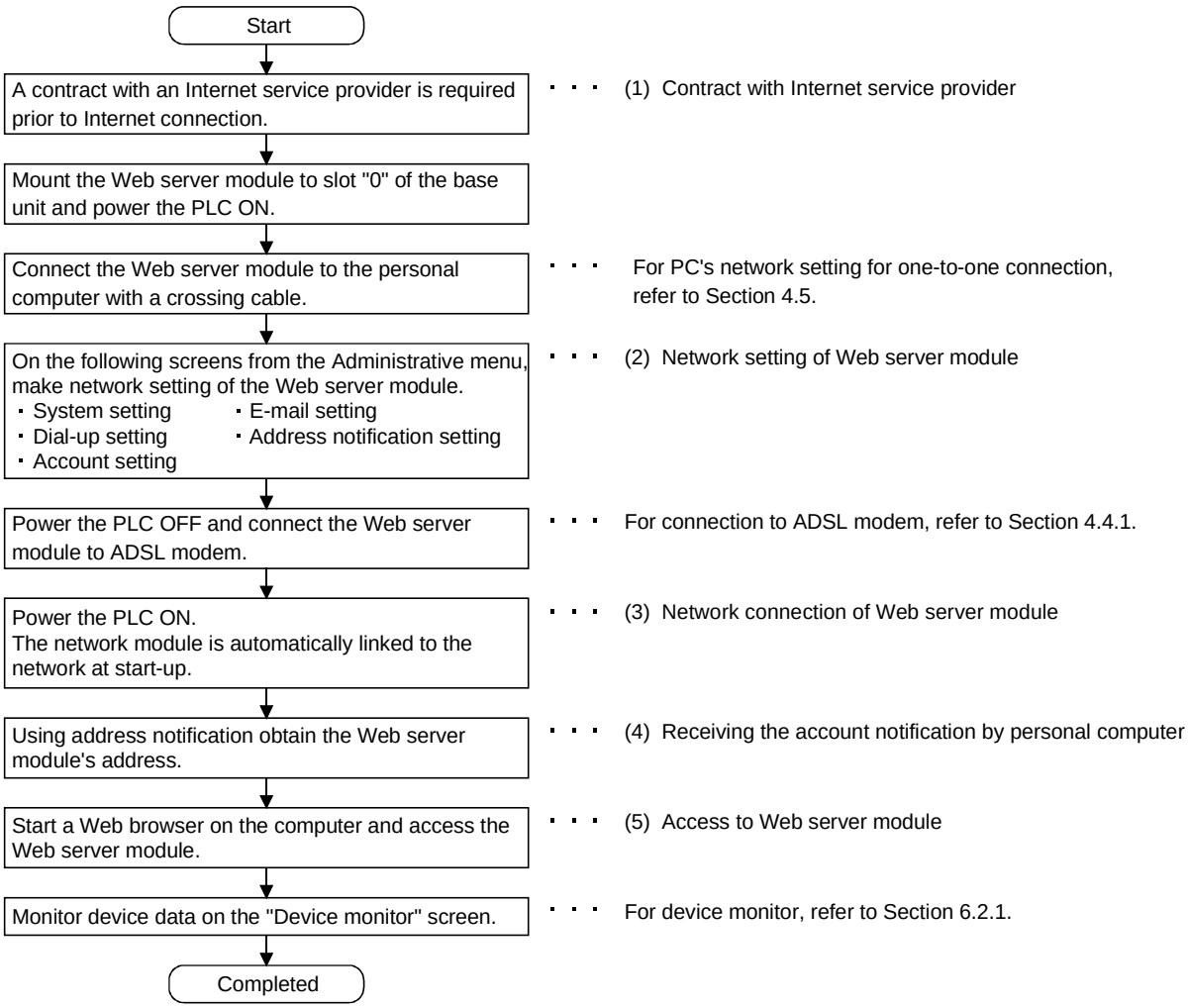
This section explains the case where the Web server module is connected to the dial-up-connected network using ADSL.

5.2.1 Access procedure

The following shows the procedure for access from the external device to the PLC CPU when an ADSL modem is used for connection.

[System configuration for dial-up connection]




Start
A contract with an Internet service provider is required prior to Internet connection.
(1) Contract with Internet service provider
Mount the Web server module to slot "0" of the base unit and power the PLC ON.
Connect the Web server module to the personal computer with a crossing cable.
For PC's network setting for one-to-one connection, refer to Section 4.5.
On the following screens from the Administrative menu, make network setting of the Web server module.
・System setting
・E-mail setting
・Dial-up setting
・Address notification setting
・Account setting
(2) Network setting of Web server module
Power the PLC OFF and connect the Web server module to ADSL modem.
For connection to ADSL modem, refer to Section 4.4.1.
Power the PLC ON.
The network module is automatically linked to the network at start-up.
(3) Network connection of Web server module
Using address notification obtain the Web server module's address.
(4) Receiving the account notification by personal computer
Start a Web browser on the computer and access the Web server module.
(5) Access to Web server module
Monitor device data on the "Device monitor" screen.
For device monitor, refer to Section 6.2.1.
Completed

(1) Contract with Internet service provider

(a) To connect the Web server module to the Internet, a contract with an Internet service provider is required.
Contact the Internet service provider for service details and how to sign up for the service.

(b) Create a proper environment for the external device (personal computer) so that Internet connection is available.

POINT
It is recommended to confirm in advance that access to the Internet is available from the personal computer, etc. using the connection account of the Web server module.

(2) Network setting of Web server module

(a) Make setting to connect the Web server module to the network.

(b) From the Administrative menu, set as follows.
(For other than the following settings, the default values.will be used.):

[Administrative menu] → "System setting" (Refer to 1)) → "Dial-up setting" (Refer to 2)) → "E-mail setting" (Refer to 3)) → "Address notification setting" (Refer to 4)) → "Account setting" (Refer to 5))

1) System setting (Refer to Section 4.6.3)

Item	Set value
Network type setting	Select "Dial-up to the network (modem, ADSL).".
IP address setting	Select "Obtain an IP address automatically.".
DNS server setting	Select "Obtain a DNS server address automatically.".
Automatic network connection setting at start-up	Select "Automatic connection to network at start-up.".

2) Dial-up setting (Refer to Section 4.6.4)

Item	Set value
Connection method	Select "ADSL".
Connection account	Enter the account obtained from the Internet service provider. • User name : (example) mitsubishi@****.****.ne.jp • Password : (example) MITSUBISHI • Confirm password : (example) MITSUBISHI

3) E-mail setting (Refer to Section 6.6.3)

Item	Set value
Send e-mail account setting	Enter the e-mail setting of the Web server module. • SMTP server name : (example) mailserver@****.****.ne.jp • E-mail address (From:) : (example) mailaddress@****.****.ne.jp • User name : (example) mitsubishi@****.****.ne.jp • Password : (example) MITSUBISHI • Confirm password : (example) MITSUBISHI
E-mail address (To:) setting	Enter an e-mail address (To:) of the personal computer. • No. 1 : (example) pcmailaddress@****.****.ne.jp

4) Address notification setting (Refer to Section 6.9.2)
[IP address setting]

Item	Set value
Notification IP address	• Select "Notify the IP address set in the "System setting" screen.". • Select "Notify the HTTP port number set in the "System setting" screen.".

[E-mail notification setting]

Item	Set value
IP address notification	• Select "Notify an IP address at network connection". • Select "E-mail address (TO:) No. 1" as the destination of IP address notification.

5) Account setting (Refer to Section 4.6.5)

Item	Set value
Account setting No. 1	Enter the following setting for the accounting setting No. 1. (Delete the default account.) • User name : administrator001 • Password : (example) QJ71WS96ADMIN • Confirm password : (example) QJ71WS96ADMIN

POINT

After changing the setting, make sure to click on the "Save" button.
The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset. (*)
* Note that the settings of the System setting and Dial-up setting are not updated even if the "Update" button is clicked.

(3) Network connection of Web server module

(a) Since "Automatic connection to network at start-up." is set in the automatic network connection setting at start-up on the "System setting" screen, the Web server module automatically makes network connection at start-up.

(b) Using GX Developer, confirm the following connection status of the Web server module to the network with input signals of the buffer memory and the PLC CPU.

1) Module READY (X0) is on.
2) Network connection status (X4) is on.
3) IP address and subnet mask storage areas in the network connection status area
   - IP address (buffer memory: 55 to 56)
   - Subnet mask (buffer memory: 57 to 58)

(c) When connection to the network fails, connection error (X19) turns on and an error code is stored into the connection error code area (buffer memory: 30).
Take corrective measures according to the troubleshooting.

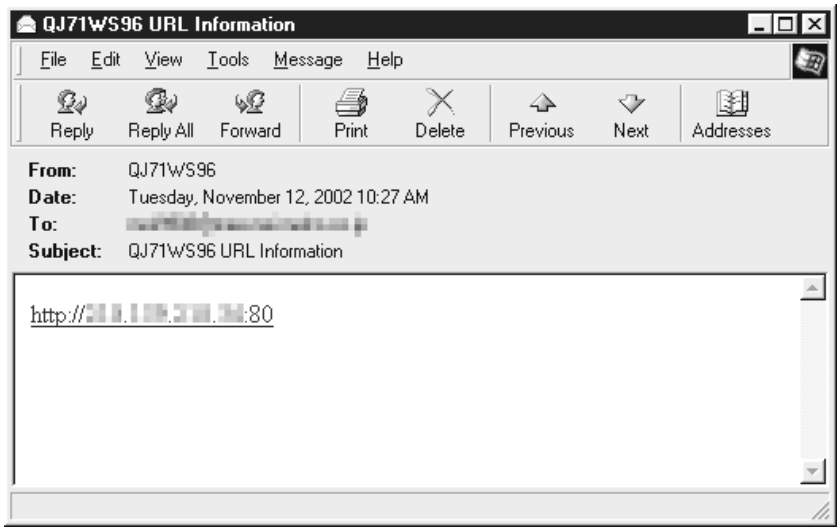
POINT

In the network connection status area (buffer memory: 28 to 69), the current network connection status of the Web server module can be confirmed.

(4) Receiving the account notification by the personal computer

By the address notification setting, the URL of the Web server module is sent by e-mail to the destination e-mail address.

(Example) In the case of Microsoft© Corporation's Outlook© Express 5.5


QJ71WS96 URL Information
File Edit View Tools Message Help
Reply Reply All Forward Print Delete Previous Next Addresses
From: QJ71WS96
Date: Tuesday, November 12, 2002 10:27 AM
To:
Subject: QJ71WS96 URL Information
http://[redacted]:80

(5) Access to Web server module

(a) Start a Web browser on the personal computer and enter the Web server module address obtained by the address notification function.

(b) When the user authentication screen is displayed at the time of access to the Web server module, enter the account. (Setting in (2) 5))
User name : administrator001
Password : (example) QJ71WS96ADMIN

(c) The standard screen is displayed in the Web browser.

REMARK

When using a modem for connection, make the dial-up setting as shown below. For other than the following, the setting is the same as the one for ADSL.

Item	Set value
Connection method	Select "Modem".
Connection account	Enter the account obtained from the Internet service provider.
Access point	Enter the access point of the Internet service provider. • Point phone number 1 : (example) 000111222
Dial method	Select "Tone".
Retry	Set the number of retries to "3" times.
Modem attribute	Set the communication specifications between the Web server module and the modem. • Communication speed : 115200 bps • Calling timeout : 100 seconds • CALL function : Enable • Disconnect function : Enable, 5 minutes

5 - 12

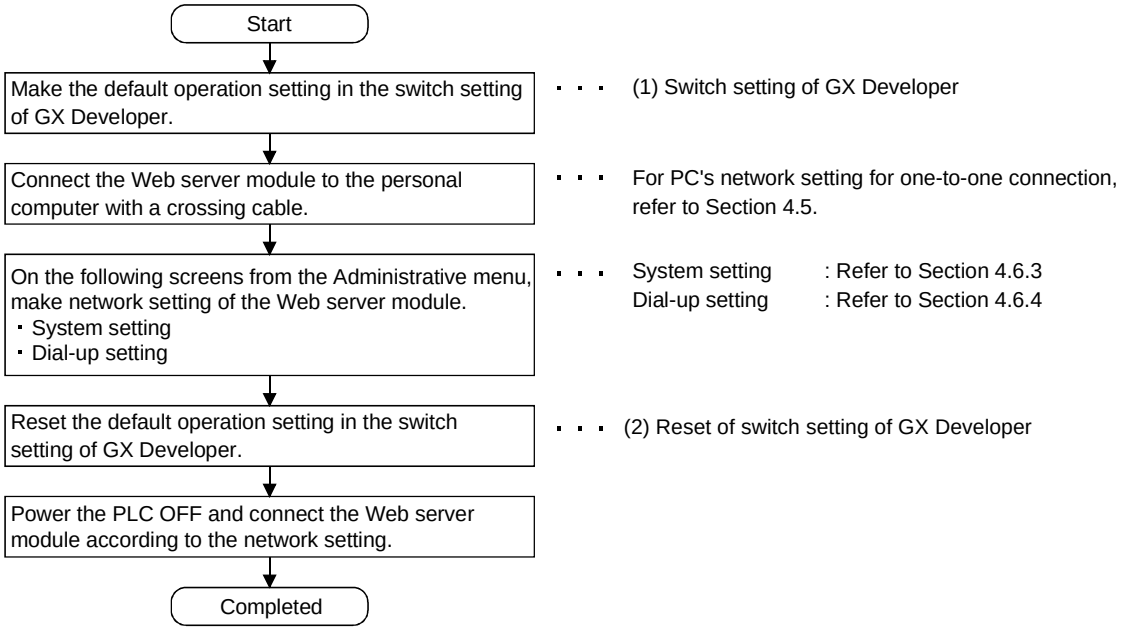
5.3 Operation for Returning to One-to-one Connection

This section explains the operation for returning to one-to-one connection.
If connection of the Web server module to the network cannot be made or if the network setting is to be changed, it is required to make one-to-one connection and perform setting with the Web browser.

POINT
The setting of the Web server module can be changed via the network, however, it is recommended to set it back to one-to-one connection.

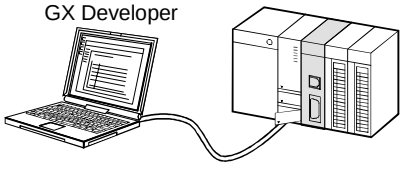
5.3.1 Procedure for returning to one-to-one connection

The following is the operating procedure for returning to one-to-one connection.

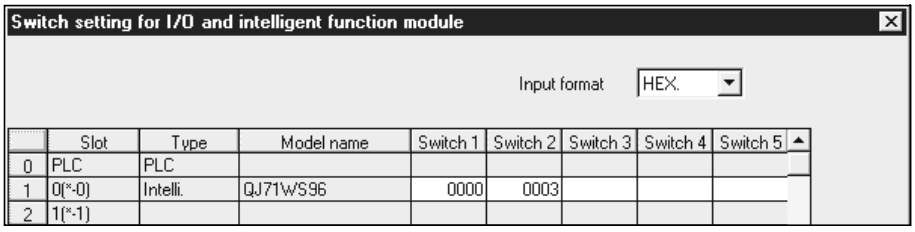

Start
Make the default operation setting in the switch setting of GX Developer.
(1) Switch setting of GX Developer
Connect the Web server module to the personal computer with a crossing cable.
For PC's network setting for one-to-one connection, refer to Section 4.5.
On the following screens from the Administrative menu, make network setting of the Web server module.
・System setting
・Dial-up setting
System setting : Refer to Section 4.6.3
Dial-up setting : Refer to Section 4.6.4
Reset the default operation setting in the switch setting of GX Developer.
(2) Reset of switch setting of GX Developer
Power the PLC OFF and connect the Web server module according to the network setting.
Completed

(1) Switch setting of GX Developer

Make the default operation setting in the switch setting of GX Developer.
Refer to Section 4.7 for details on the switch setting of GX Developer.



(a) Write "0003H" to Switch 2 in the switch setting of GX Developer.



(b) After writing the PLC parameters to the PLC CPU, power the PLC off and then on or reset the CPU module.

(c) The settings of the Web server module are as follows.

1) System setting
- IP address : 192. 168. 3. 3
- Subnet mask : 255. 255. 255. 0
- Connecting through LAN or the router.
- Use the default HTTP port number (80).
- Use the default FTP port number (21).
- System name: QJ71WS96
- Do not execute network diagnoses (ping).
- Automatic connection to network at start-up.

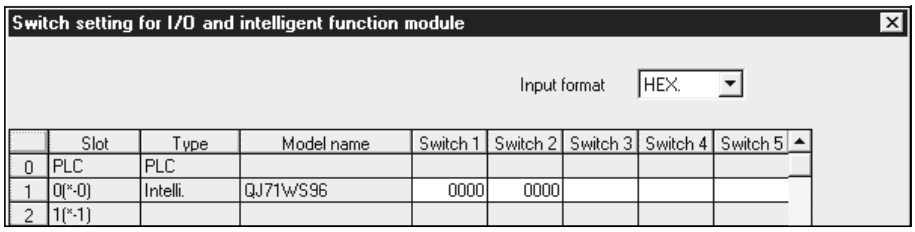
2) Account setting
- User name :QJ71WS96 (All in uppercase)
- Password :MITSUBISHI (All in uppercase)
- Access authority :Device write/Tag component write/Administrator
- Initial screen : Standard screen top page

3) IP filter setting
- Pass the IP packet that has not been set in [Filter setting]. (Without filter setting)

(2) Reset of switch setting of GX Developer

After setting the Web server module with the Web browser, reset the default setting in the switch setting of GX Developer.

(a) Write "0000H" to Switch 2 in the switch setting of GX Developer.



(b) After writing the PLC parameters to the PLC CPU, power the PLC off and then on or reset the CPU module.

(c) The settings made on the corresponding setting screen of the standard screen of the Web browser are enabled.

5.4 Network connection/disconnection procedures for non-continuous connection

This section explains the network connection and disconnection methods and their combinations and the procedures for connecting to and disconnecting from the network with sequence programs.

5.4.1 Network connection and disconnection methods and their combinations

This section provides the network connection and disconnection methods and their combinations.

(1) Network connection methods

The following indicates how the Web server module connects to the network.

(a) Automatic connection at start-up
When "Automatic connection to network at start-up." is set in the system setting, the Web server module automatically connects to the network at a start. (Refer to Section 4.6.3.)

(b) Connection using sequence program
When Network connection request (Y5) turns from OFF to ON in a sequence program, the Web server module connects to the network. (Refer to Section 5.4.2.)

(c) Automatic connection at execution of dedicated instruction (WMSEND, FTPPUT, FTPGET)
When the dedicated instruction is executed, the Web server module automatically connects to the network. (Refer to Chapter 8.)

(d) Automatic connection at e-mail transmission or file transfer by logging function
When e-mail transmission or file transfer is performed, the Web server module automatically connects to the network. (Refer to Section 6.4.)

(e) Automatic connection at e-mail transmission by event function
When e-mail transmission is performed, the Web server module automatically connects to the network. (Refer to Section 6.5.)

(f) Connection by Call function (Only when modem is connected)
When the "Call function" is enabled in the dial-up setting, making a phone call from a telephone to the Web server module side modem connects the Web server module to the network. (Refer to Section 4.6.4.)

(2) Network disconnection methods

The following indicates how the Web server module disconnects from the network.

(a) Disconnection using sequence program
When Network disconnection request (Y7) turns from OFF to ON in a sequence program, the Web server module disconnects from the network. (Refer to Section 5.4.2.)

(b) Disconnection using line disconnection part
When a button is clicked in a line disconnection part, the Web server module disconnects from the network. (Refer to Section 7.4.3.)

(c) Disconnection using Disconnect function (Only when modem is connected)
When the "Disconnect function" is enabled in the dial-up setting, the Web server module automatically disconnects from the network if no access is made to the Web server module for the specified period of time. (Refer to Section 4.6.4.)

(d) Automatic disconnection after completion of dedicated instruction (WMSEND, FTPPUT, FTPGET)
When the Web server module has automatically connected to the network at execution of the dedicated instruction, it automatically disconnects from the network after the dedicated instruction is completed. (Refer to Chapter 8.)

(e) Automatic disconnection after e-mail transmission or file transfer by logging function
When the Web server module has automatically connected to the network at e-mail transmission or file transfer, it automatically disconnects from the network after e-mail transmission or file transfer. (Refer to Section 6.4.)

(f) Automatic disconnection after e-mail transmission by event function
When the Web server module has automatically connected to the network at e-mail transmission with "Disconnect from the network after sending mail." enabled in the event setting, the Web server module automatically disconnects from the network after e-mail transmission. (Refer to Section 6.5.)
When "Disconnect from the network after sending mail." was disabled in the event setting, the Web server module does not disconnect from the network after e-mail transmission.

POINT

(1) Before the Web server module is disconnected from the network, a measure for the next network connection should have been taken.
(2) When the Web server module has automatically connected to the network at execution of any of the following operations, it automatically disconnects from the network after completion of the corresponding operation.
However, if any of these is executed with the Web server module connected to the network (Network connection status (X4) is ON), the Web server module does not disconnect from the network after completion of the operation.
- Execution of dedicated instruction (WMSEND, FTPPUT, FTPGET)
- E-mail transmission/file transfer by logging function
- E-mail transmission by event function

(3) Combinations of network connection and disconnection methods

Combinations of the network connection and disconnection methods are indicated below.

Connection method \ Disconnection method		Disconnection using sequence program	Disconnection using line disconnection part	Disconnection using Disconnect function (Only when modem is connected)	Automatic disconnection
Automatic connection at start-up		○	○	○	×
Connection using sequence program		○	○	○	×
Automatic connection at execution of dedicated instruction (WMSEND, FTPPUT, FTPGET)		×	×	×	○
Automatic connection at e-mail transmission or file transfer by logging function		×	×	×	○
Automatic connection at e-mail transmission by event function	Set to "Disconnect"	×	×	×	○
	Set to "Not disconnect"	○	○	○	×
Connection by Call function (Only when modem is connected)		○	○	○	×

○: Can be disconnected ×: Cannot be disconnected

5.4.2 Network Connection/Disconnection Processing Using Sequence Program

The Web server module must be connected to the network for access from the external device.
With the Web server module connected to the network, access from the external device by Web or FTP is available.

(1) Outline of connection/disconnection processing using sequence program

(a) Connection/disconnection processing to/from the network using a sequence program is required in the following cases:

1) Controlling the timing of connection/disconnection to/from the network or connecting to the network in consideration of time is desired.

2) "No connection to network at start-up." is selected in the automatic network connection setting at start-up on the "System setting" screen.

(b) When Network connection request (Y5) is turned from OFF to ON, the Web server module starts network connection processing.
Refer to Section 3.6.2 for Network connection request (Y5).

(c) When Network disconnection request (Y7) is turned from OFF to ON, the Web server module starts network disconnection processing.
Refer to Section 3.6.2 for Network disconnection request (Y7).

(d) For connection/disconnection processing of the Web server module to/from the network, System setting and Dial-up setting must have been completed.

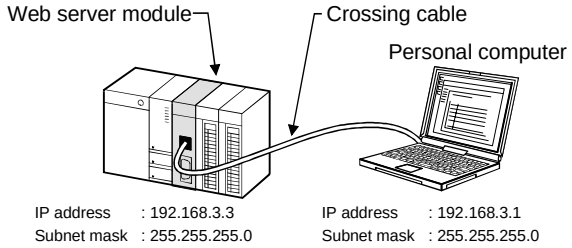
(2) Program example

This section explains programs for connection/disconnection using sequence programs.

(a) Program execution environment

1) Mount the Web server module on Slot "0" of the main base.

2) Connect the Web server module and the personal computer with a crossing cable.



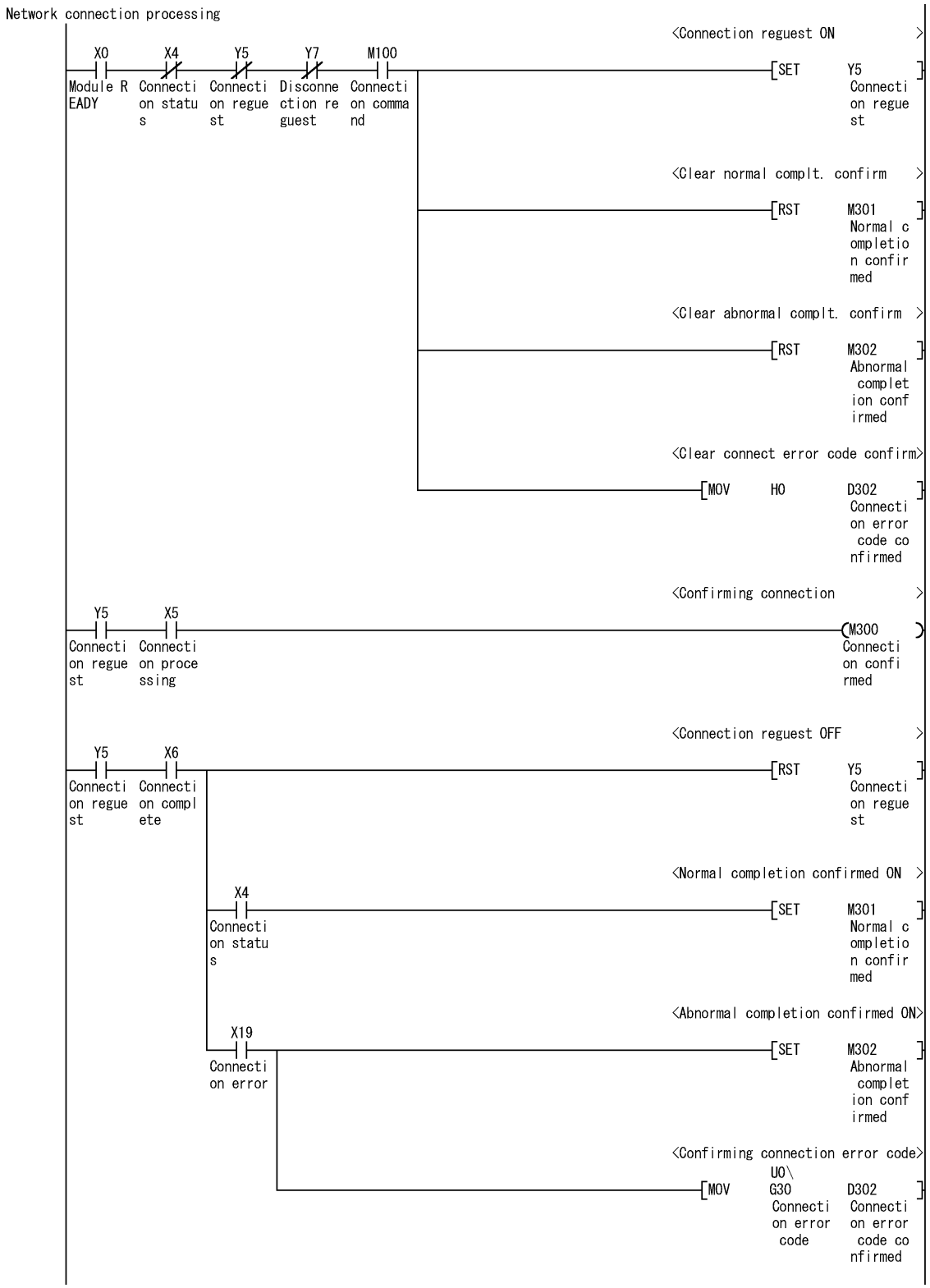
3) Make the following network setting of the personal computer.
IP address : 192. 168. 3. 1
Subnet mask : 255. 255. 255. 0

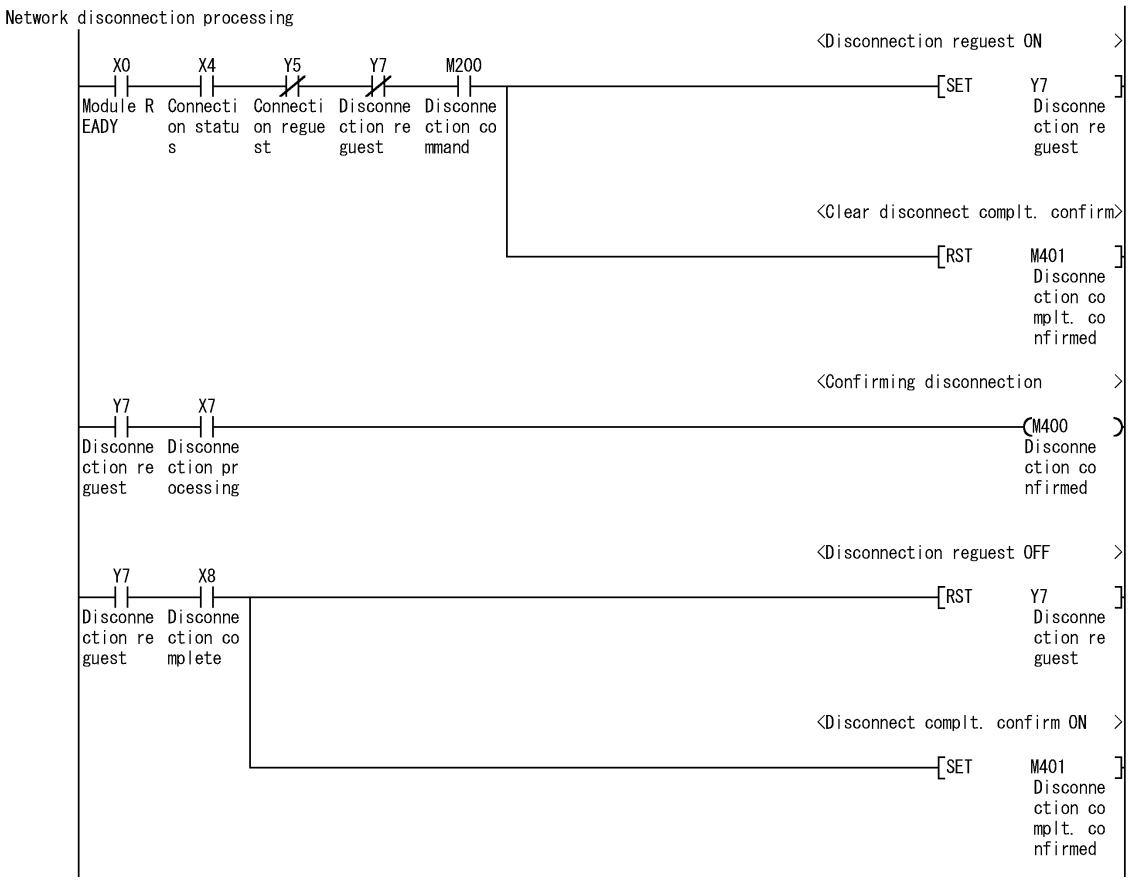
4) Make the following Web server module setting with the Web browser. (Use the default values for other than the following.)
• System setting (Refer to Section 4.6.3)

Item	Set value
Network type setting	Select "Connecting through LAN or the router.".
IP address setting	Select "Use the following IP address.". • IP address : 192. 168. 3. 3 • Subnet mask : 255. 255. 255. 0
Automatic network connection setting at start-up	Select "No connection to network at start-up.".

5) After writing the sequence program using GX Developer, power the PLC off and then on or reset the CPU module.

(b) Program example




Network disconnection processing
<Disconnection reguest ON
X0
Module READY
X4
Connection status
Y5
Connection request
Y7
Disconnection request
M200
Disconnection command
SET
Y7
Disconnection request
<Clear disconnect complt. confirm>
RST
M401
Disconnection complt. confirmed
<Confirming disconnection
Y7
Disconnection request
X7
Disconnection processing
M400
Disconnection confirmed
<Disconnection reguest OFF
Y7
Disconnection request
X8
Disconnection complete
RST
Y7
Disconnection request
<Disconnect complt. confirm ON
SET
M401
Disconnection complt. confirmed

6 FUNCTIONS

This chapter explains the functions of the Web server module.

6.1 Function List of Web Server Module

The following is the function list of the Web server module.

Function		Description	Reference Section
Monitor Function	Device monitor	Monitors device values.	Section 6.2.1
	Tag data monitor	Monitors tag data.	Section 6.2.2
	Logging monitor	Monitors logging data.	Section 6.2.3
	Event history monitor	Monitors event histories.	Section 6.2.4
	PLC diagnostics monitor	Monitors PLC CPU operation status.	Section 6.2.5
	Self-diagnostics monitor	Monitors Web server module operation status.	Section 6.2.6
Tag function		Stores a set of device data of individual PLC CPUs on a network as a tag, and collects those device data in tag unit. Collected data can be displayed in the Web browser.	Section 6.3
Logging function		Stores tag data as a CSV file in time series at the user-specified execution timing (by setting timing, start/stop condition). The stored file can be displayed in the Web browser or downloaded by FTP operation, etc.	Section 6.4
Event monitor function		Monitors the PLC CPU status (CPU monitor), tag data (tag monitor) and time (time/interval monitor), and stores the historical data of occurred events into CSV files. The stored files can be can be displayed in the Web browser or downloaded by FTP operation. At event occurrence, e-mail can be sent as necessary.	Section 6.5
E-mail function		Used to send e-mail. ・E-mail transmission by PLC CPU ・E-mail transmission by event monitor function	Section 6.6
FTP function		Used to transfer a file between the Web server module and external device. ・FTP server function ・FTP client function	Section 6.7
Access log function		Used to record access from the external device to the Web server module.	Section 6.8
Address notification function		Used to notify the external device of the Web server module address.	Section 6.9
Data management function		Backs up/restores the standard ROM, formats the compact flash card, and performs CSV export/import.	Section 6.10
Diagnostic function		Used to perform self-diagnostics and connection test of the Web server module.	Section 6.11
User screen creation function		Creates user-original Web screens using the standard-supplied user parts (applet, SSI, CGI).	Chapter 7

6.2 Monitor Function

6.2.1 Device monitor

[Setting Purpose]

This monitoring function is used to specify one type of device to execute batch monitor.

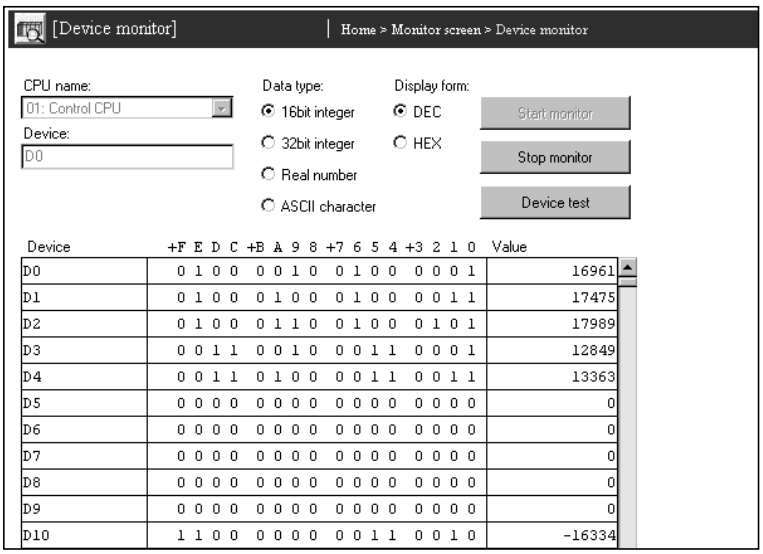
Users with the device write authority can write data in word unit or operate ON/OFF data in bit unit.

[Start Procedure]

[Monitor screen] → "Device monitor" (refer to (1)) → Device test → "Device test" (refer to (2))

(1) Device monitor

[Setting screen]



[Setting Item]

Item	Description
CPU name	Selects the access target CPU.
Device	Specifies the device type and actual device number.
Data type	Selects the data type.
Display form	Selects the display form when the data type is 16 bit integer or 32 bit integer.
Start monitor	Starts Device monitor.
Stop monitor	Stops Device monitor.
Device test	Performs a device test.

(a) CPU name
1) Set the access target CPU.
2) Select the CPU name set in the access target CPU setting.
(Refer to Section 4.6.7 for the access target CPU setting.)
3) The CPU name drop-down list displays the setting No. and CPU names of the access target CPU setting.
(Example) 01: Control CPU
4) By default, the host CPU of the Web server module is set as the access target CPU setting No. 1.

(b) Device
1) Specify the device type and actual device number of the device.
2) Device specification by qualification (indexing, digit specification, bit specification for word device) is not available.

(c) Data type
Select the data type of the word device.
16 bit integer : Displayed as a 16 bit integer.
32 bit integer : Displayed as a 32 bit (double word) integer.
Real number : Displayed in real number.
ASCII character : Displayed in ASCII characters.

(d) Display form
Select the display form when the data type is a 16 bit integer or 32 bit integer.
DEC: Displayed in decimal.
HEX: Displayed in hexadecimal.

(e) Monitor form
The monitor form is indicated below.
(Example) When the data registers (D0 and later) are displayed as 16 bit integers in decimal

Device	+F E D C +B A 9 8 +7 6 5 4 +3 2 1 0	Value
D0	0 1 0 0 0 0 1 0 0 1 0 0 0 0 0 1	16961
D1	0 1 0 0 0 1 0 0 0 1 0 0 0 0 1 1	17475
D2	0 1 0 0 0 1 1 0 0 1 0 0 0 1 0 1	17989
D3	0 0 1 1 0 0 1 0 0 0 1 1 0 0 0 1	12849
D4	0 0 1 1 0 1 0 0 0 0 1 1 0 0 1 1	13363
D5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0
D6	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0
D7	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0
D8	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0
D9	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0
D10	1 1 0 0 0 0 0 0 0 0 1 1 0 0 1 0	-16334

1) 2) 3)

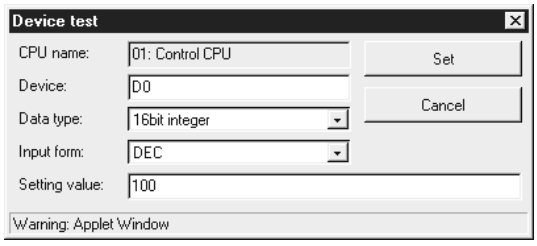
1) The devices are displayed.
2) The bit ON/OFF statuses are displayed. (1: ON, 0: OFF)
3) The values stored in the word devices are displayed.
(DEC/HEX display)

(2) Device test

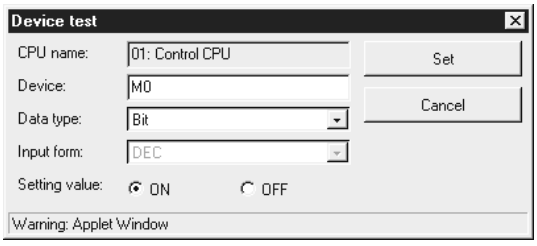
Executing device test turns the bit device of the PLC CPU on/off forcibly or changes the current value of the word device.
Only users with the device write authority are allowed to conduct this test.
Refer to Section 4.6.5 for the user authority.

[Setting screen]

(When Data type is 16 bit integer/32 bit integer)



(When Data type is Bit)



[Setting Item]

Item	Description
CPU name	Displays the CPU name on which the device test will be performed.
Device	Specifies the device type and actual device number.
Data type	Selects the data type of the value to be set.
Input form	Selects the input form when the data type is 16 bit integer or 32 bit integer.
Setting value	Sets the setting value.
Set	Executes the device test.
Cancel	Cancels the setting and returns to the Device monitor screen.

(a) CPU name
The CPU name on which the device test will be performed is displayed.

(b) Device
1) Specify the device type and actual device number.
2) Device specification by qualification (indexing, digit specification, bit specification for word device) is not available.

(c) Data type
Select the data type of the value to be set.
Bit : Set in bit unit. (Enabled when bit device is used)
16 bit integer : Set as a 16 bit integer. (Enabled when word device is used)
32 bit integer : Set as a 32 bit (double word) integer. (Enabled when word device is used)

(d) Input form
Select the input form when the data type is a 16 bit integer or 32 bit integer.
DEC: Set in decimal.
HEX: Set in hexadecimal.

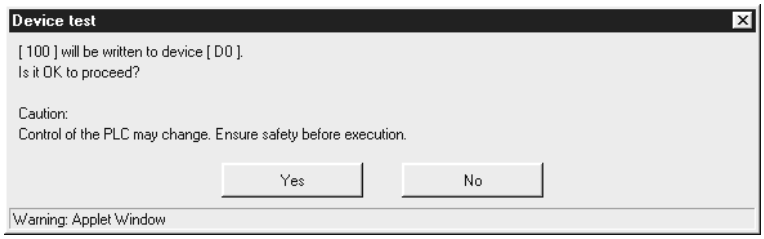
(e) Setting value

1) When setting the data type as a 16 bit integer or 32 bit integer, set a new value in accordance with the DEC/HEX input form.

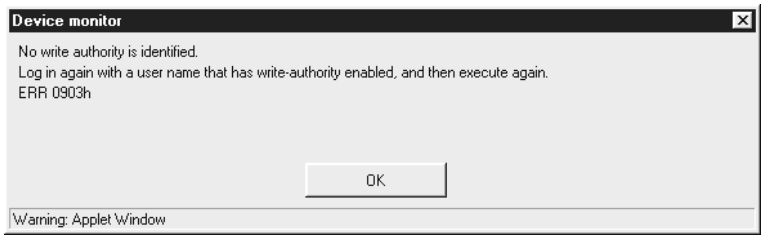
2) When setting the data type in bit, set ON/OFF.

POINT

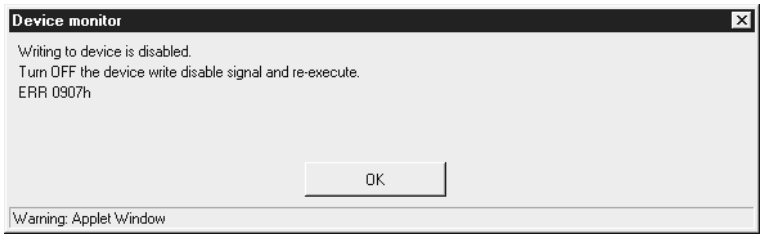
(1) The device test may affect the control of the PLC. Ensure safety before execution.


Device test
[100] will be written to device [D0].
Is it OK to proceed?
Caution:
Control of the PLC may change. Ensure safety before execution.
Yes
No
Warning: Applet Window

(2) A user without the device write authority is not allowed to conduct the device test.
When the device test is attempted, the following screen appears.


Device monitor
No write authority is identified.
Log in again with a user name that has write-authority enabled, and then execute again.
ERR 0903h
OK
Warning: Applet Window

(3) When Device write disable request (YA) has been set to "Disable", the device test is not available.
When the device test is attempted, the following screen appears.



6.2.2 Tag data monitor

[Setting Purpose]

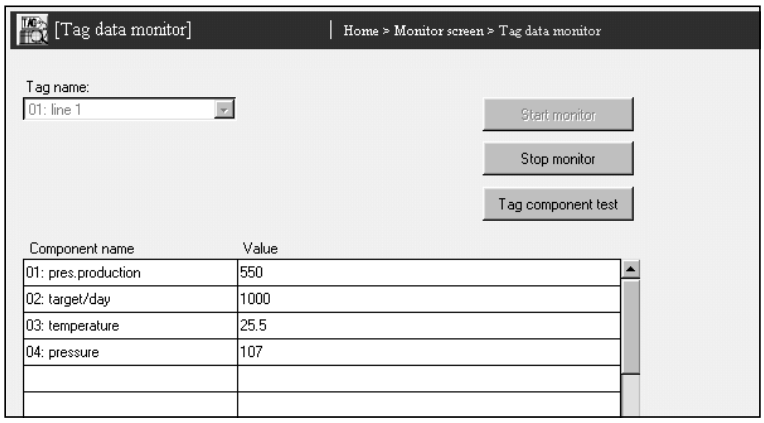
This monitoring function is used to monitor the tag data, which have been collected by the Web server module with the tag function, in tag unit.
Refer to Section 6.3 for the tag function.
By conducting a tag component test, users with the tag component write authority can write tag data in the component unit.

[Start Procedure]

[Monitor screen] → "Tag data monitor" (refer to (1)) → Tag component test → "Tag component test" (refer to (2))

(1) Tag data monitor

[Setting screen]



[Setting Item]

Item	Description
Tag name	Selects the tag name to perform tag data monitor.
Start monitor	Starts tag data monitor.
Stop monitor	Stops tag data monitor.
Tag component test	Performs a tag component test.

(a) Tag name

1) Set the tag data to perform tag data monitor.
2) Select the tag name set in the tag setting.
(Refer to Section 6.3.3 for the tag setting.)
3) The Tag name drop-down list displays the setting No. and tag names of the tag setting.

(b) Monitor form

The monitor form is indicated below.

Component name	Value
01: pres.production	550
02: target/day	1000
03: temperature	25.5
04: pressure	107

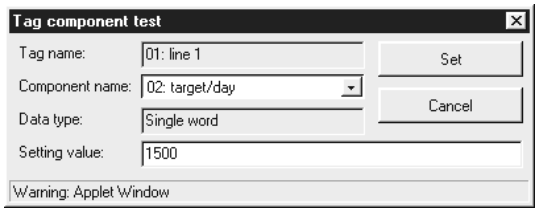
1) 2)

1) Components set in the tag are displayed.
2) The values stored for the components are displayed.
- The values stored for the components are displayed in the display form set in "Component setting" of the tag setting.
- "ERR****h" is displayed when an error has occurred in the collection of the component. (**** indicates the error code.)
- "NO DATA" is displayed when no component has been collected.

(2) Tag component test

Executing the tag component test changes the current value of the tag data.
Only a user with the tag component write authority is allowed to conduct this test.
Refer to Section 4.6.5 for the user authority.

[Setting screen]



[Setting Item]

Item	Description
Tag name	Displays the tag name to perform the tag component test.
Component name	Selects a component name to be tested.
Data type	Displays the data type of the selected component.
Setting value	Sets the setting value.
Set	Executes the tag component test.
Cancel	Cancels the setting and returns to the Tag data monitor screen.

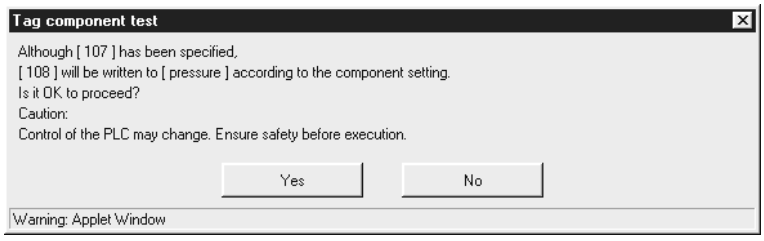
(a) Tag name
The tag name to perform the tag component test is displayed.

(b) Component name
1) Select the component name set in "Component setting" of the tag setting.
(Refer to Section 6.3.3 for "Component setting" of the tag setting.)
2) The Component name drop-down list displays the setting No. and component names of the Component setting.

(c) Data type
The data type of the selected component is displayed.

(d) Setting value
Set the setting value according to the data type of the selected component.
1) When the data type is single word, double word or real number, set a new value in decimal. (*1) (*2)
2) When the data type is Bit, set ON/OFF.
3) When the data type is String, set a character string.

*1 When operation specification has been set to the target component, carry out an inverse operation to operation specification for the setting value and write the result to the device.
(Example) When "100" is set as the setting value for the component in which "Single word" has been set as Data type and "×2" as Operation specification, "100 / 2 = 50" is actually written to the device.
Note that, an error may be produced between the setting value and the actually written component value.
(Example) When "107" is set as the setting value for a component in which "Single word" has been set as Data type and "×2" as Operation specification, "107 / 2 = 54" is actually written to the device.
The component value to be displayed on the Tag data monitor is "54 × 2 = 108".

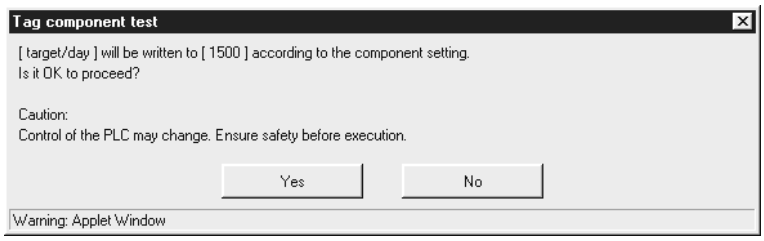

Tag component test
Although [107] has been specified,
[108] will be written to [pressure] according to the component setting.
Is it OK to proceed?
Caution:
Control of the PLC may change. Ensure safety before execution.
Yes
No
Warning: Applet Window

*2 When a real number is written to the target component, a rounding error may be produced.

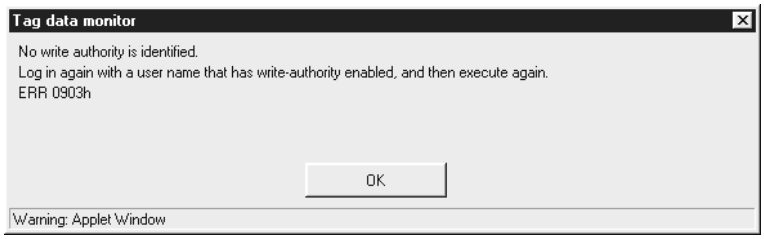
6 - 8

POINT

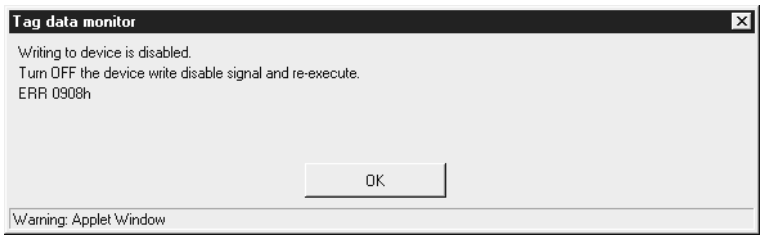
(1) The tag component test may affect the control of the PLC. Ensure safety before execution.


Tag component test
[target/day] will be written to [1500] according to the component setting.
Is it OK to proceed?
Caution:
Control of the PLC may change. Ensure safety before execution.
Yes
No
Warning: Applet Window

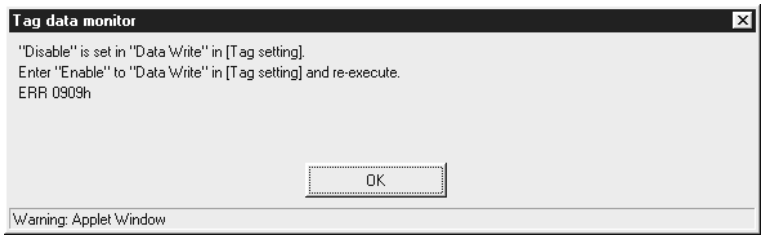
(2) A user without the tag component write authority is not allowed to conduct the tag component test.
When the tag component test is attempted, the following screen appears.


Tag data monitor
No write authority is identified.
Log in again with a user name that has write-authority enabled, and then execute again.
ERR 0903h
OK
Warning: Applet Window

(3) When Device write disable request (YA) has been set to "Disable", the tag component test is not available.
When the tag component test is attempted, the following screen appears.



(4) When "Data write" of the tag setting has been set to "Disable", the tag component test is not available. (Refer to Section 6.3.3 for the tag setting.)
When the tag component test is attempted, the following screen appears.


Tag data monitor
"Disable" is set in "Data Write" in [Tag setting].
Enter "Enable" to "Data Write" in [Tag setting] and re-execute.
ERR 0909h
OK
Warning: Applet Window

6.2.3 Logging monitor

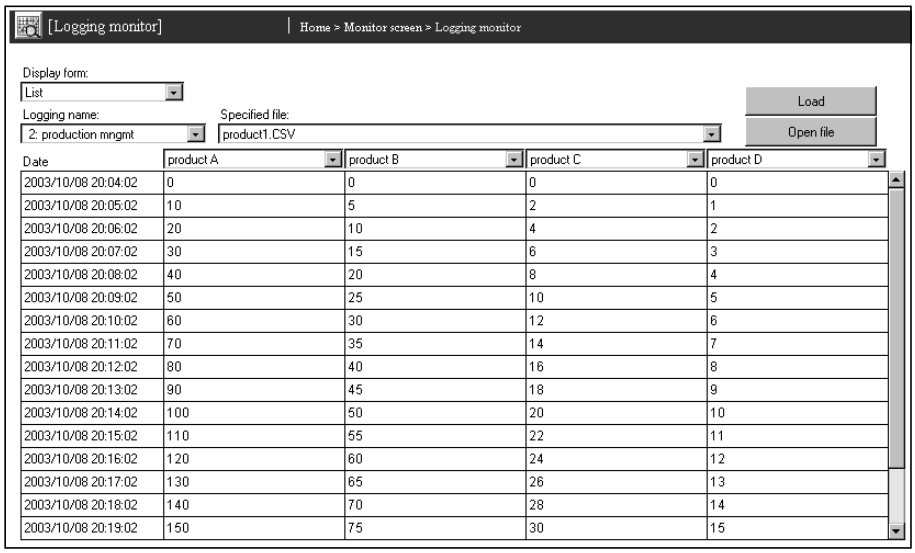
[Setting Purpose]

This monitoring function displays the logging data that have been collected by the Web server module with the logging function.
Refer to Section 6.4 for the logging function.
The display form is selectable from List or Graph.
The contents of the logging file located under /ROM/WWW/LOGGING/ or /CF/LOGGING are displayed.

[Start Procedure]

[Monitor screen] → "Logging monitor" (list) → Select "Graph" as Display form. → "Logging data" (graph)

[Setting screen]



[Setting Item]

Item	Description
Logging name	Selects the logging name to perform the logging monitor.
Specified file	Selects the logging data file to perform the logging monitor.
Display form	Selects List or Graph.
Load	Loads logging data.
Open file	Saves the logging file to the personal computer. (File download)

(1) Logging name

(a) Set the logging data to perform the logging monitor.

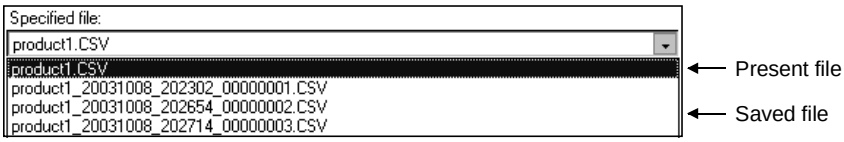
(b) Select the tag name set in the logging setting.
(Refer to Section 6.4.4 for the logging setting.)

(c) The Logging name drop-down list displays the setting No. and tag names of the logging setting.

(2) Specified file

(a) Set the logging data file to perform the logging monitor.

(b) Select the file from the current file and saved files of the logging data specified as the logging name.



(3) Display form

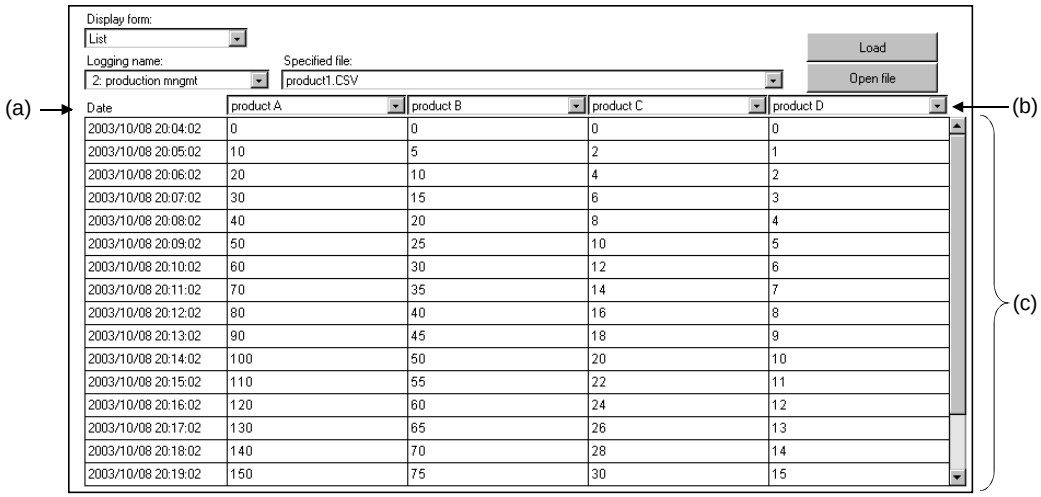
Select the display form of the logging monitor.

List : Logging data are displayed in list form.

Graph : Logging data are displayed in graph form.

(4) List

Logging data are displayed in list form.



Date	product A	product B	product C	product D
2003/10/08 20:04:02	0	0	0	0
2003/10/08 20:05:02	10	5	2	1
2003/10/08 20:06:02	20	10	4	2
2003/10/08 20:07:02	30	15	6	3
2003/10/08 20:08:02	40	20	8	4
2003/10/08 20:09:02	50	25	10	5
2003/10/08 20:10:02	60	30	12	6
2003/10/08 20:11:02	70	35	14	7
2003/10/08 20:12:02	80	40	16	8
2003/10/08 20:13:02	90	45	18	9
2003/10/08 20:14:02	100	50	20	10
2003/10/08 20:15:02	110	55	22	11
2003/10/08 20:16:02	120	60	24	12
2003/10/08 20:17:02	130	65	26	13
2003/10/08 20:18:02	140	70	28	14
2003/10/08 20:19:02	150	75	30	15

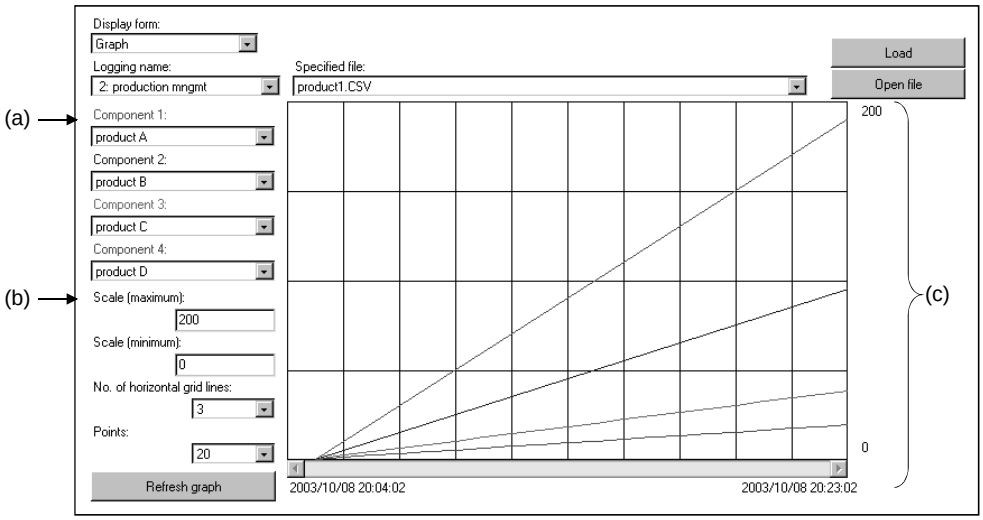
(a) Data
The logging dates and times are displayed.
(Example) 2002/08/08 08:58:17

(b) Select the component to perform the logging monitor. (Up to four components can be selected.)

(c) The values stored in the components are displayed.

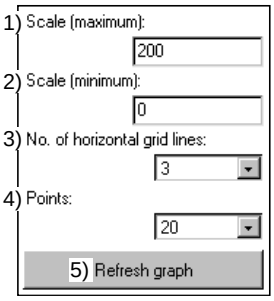
(5) Graph

Logging data are displayed in graph form.



(a) Specify the component to be monitored. (Up to four components can be specified.) (*1)

(b) Specify the maximum and minimum values and No. of horizontal grid lines in the graph. (*1)



1) Specify the maximum value of the graph.
   (Can be entered as a decimal integer or real number form (decimal/exponential form).)
2) Specify the minimum value of the graph.
   (Can be entered as a decimal integer or real number form (decimal/exponential form).)
3) Specify the No. of horizontal grid lines in the graph. (Setting range: 0 to 9)
4) Specify the point number of the displayed logging data.
   (Setting range: 10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10000)
5) The graph is refreshed in accordance with the settings of 1) to 4).

(c) The stored values for the components at the time of logging are displayed.

1) Horizontal axis: Logging date and time (example) 2002/08/05 08:58:17
   At the left end, the date and time of the oldest data in the graph display range is displayed.
   At the right end, the date and time of the latest data in the graph display range is displayed.
   Vertical axis : Value stored in the component
   As the maximum value, the value set in Scale (maximum) is displayed.
   As the minimum value, the value set in Scale (minimum) is displayed.
2) The graph lines are displayed in different colors by component.

*1 The specified values are discarded when the logging name is reselected or the logging monitor screen is redisplayed.

6.2.4 Event history monitor

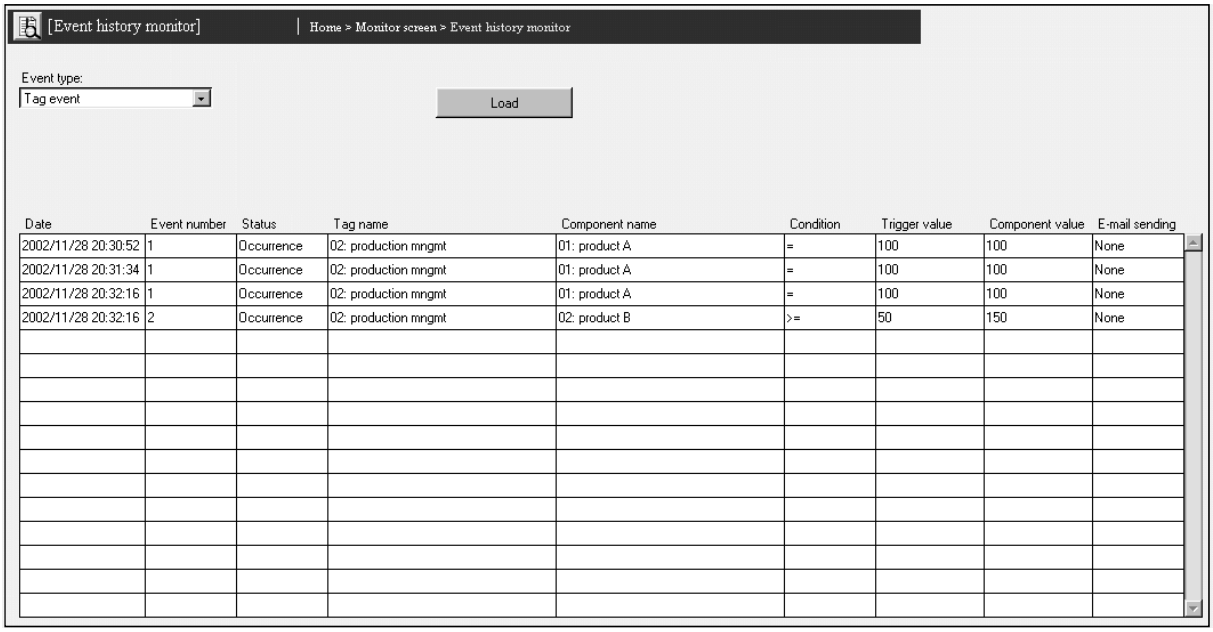
[Setting Purpose]

This monitoring function displays the history of the events occurred in the Web server module and saved with the event monitor function.
Refer to Section 6.5 for the event function.

[Start Procedure]

[Monitor screen] → "Event history monitor" (CPU event) → 1)
1) → Select "Tag event" as Event type. → "Event history monitor (Tag monitor)"
1) → Select "Time/Interval event" as Event type. → "Event history monitor (Time/Interval event)"

[Setting screen]


[Event history monitor]
Home > Monitor screen > Event history monitor
Event type:
Tag event
Load
Date
Event number
Status
Tag name
Component name
Condition
Trigger value
Component value
E-mail sending
2002/11/28 20:30:52 1 Occurrence 02: production mngmt 01: product A = 100 100 None
2002/11/28 20:31:34 1 Occurrence 02: production mngmt 01: product A = 100 100 None
2002/11/28 20:32:16 1 Occurrence 02: production mngmt 01: product A = 100 100 None
2002/11/28 20:32:16 2 Occurrence 02: production mngmt 02: product B >= 50 150 None

[Setting Item]

Item	Description
Event type	Selects the event type.
Load	Loads event history data.

(1) Event type

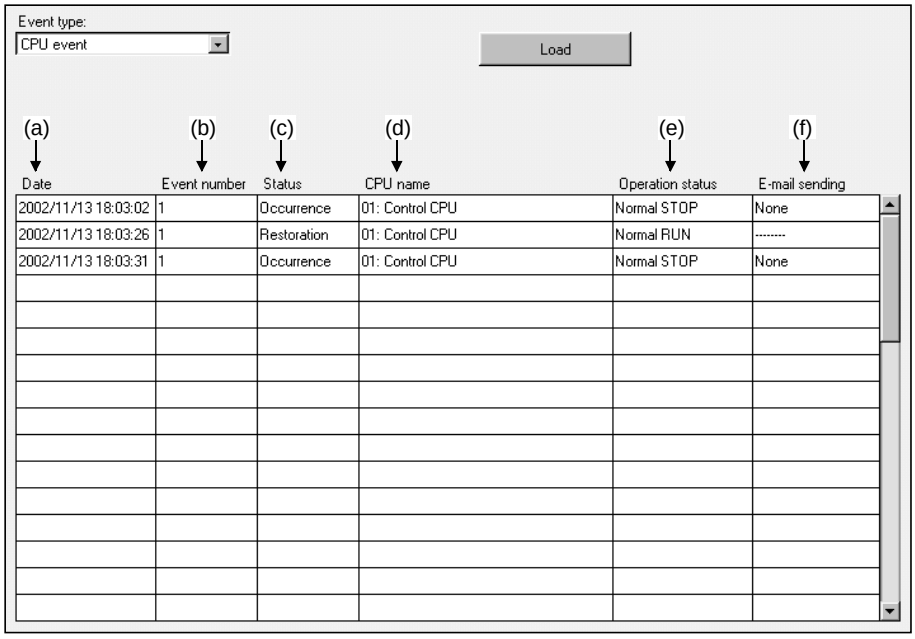
Select the event type to be monitored.

- CPU event (Refer to (2))
- Tag event (Refer to (3))
- Time/Interval event (Refer to (4))

(2) CPU event

The CPU event history is monitored.

The contents of /ROM/WWW/EVENT/CPUWATCH.CSV are displayed.



(a) Date

The date and time when the event occurred/was restored is displayed.

(Example) 2002/08/05 08:58:17

(b) Event number

1) The event number of the event occurrence/restoration is displayed.
2) The event number is the No. set in "CPU event setting" of the event setting.

(c) Status

The occurrence/restoration of the event is displayed.

(d) CPU name

1) The name of the CPU where the event occurred/was restored is displayed.
2) The setting No. and CPU names set in the access target CPU setting are displayed in the CPU name column.

(e) Operation status

The operation status of the PLC CPU in which the event occurred/was restored is displayed.

Item	Description
Normal STOP	The PLC CPU is stopped with no error.
Normal RUN	The PLC CPU is running with no error.
PAUSE	The PLC CPU is pausing.
Warning STOP (*1)	The PLC CPU is stopped with a continue error.
Warning RUN	The PLC CPU is running with a continue error.
System error	The PLC CPU is in a stop error status or cannot communicate with the target PLC CPU (e.g. network error).

*1 In the QCPU (Q mode) function version A, QCPU (A mode), QnACPU and ACPU, a warning STOP does not occur when the PLC CPU is stopped with a continue error. (A system error occurs.)

(f) E-mail sending

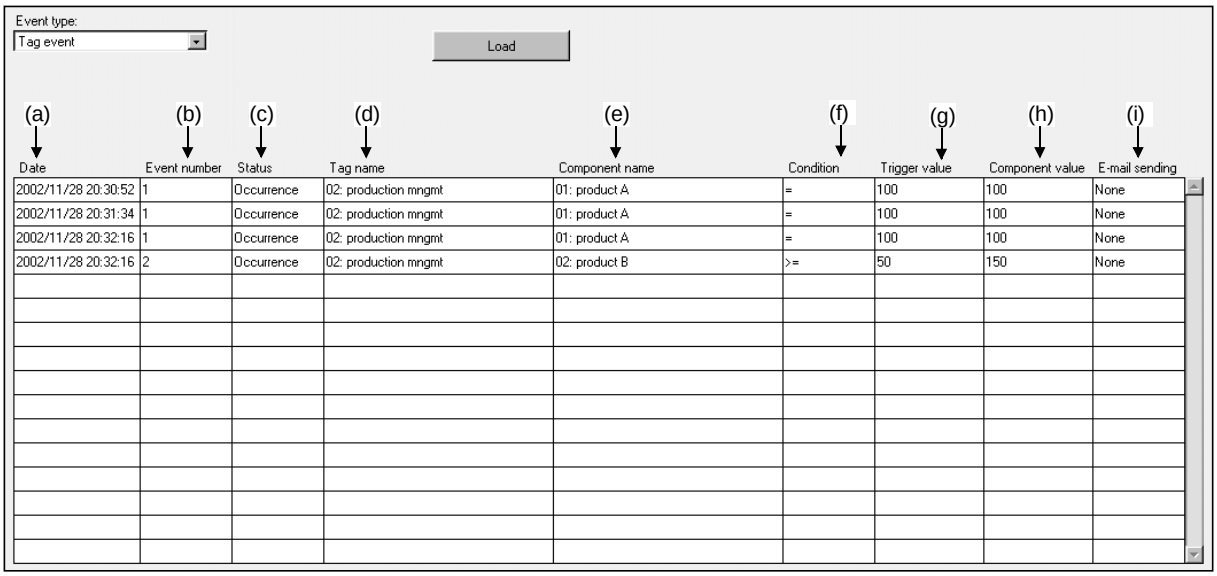
The e-mail transmission status due to event occurrence is displayed.

Item	Description
None	E-mail transmission has not set for the event that occurred.
Sending	E-mail is being sent according to the setting for the event that occurred.
Complete	E-mail was sent according to the setting for the event that occurred.
ERR****h (*indicates the error code)	Since an error occurred, e-mail transmission failed.

(3) Tag event

The tag event history is monitored.

The contents of /ROM/WWW/EVENT/TAGWATCH.CSV are displayed.



(a) Date

The date and time when the event occurred/was restored is displayed.

(Example) 2002/08/05 08:58:17

(b) Event number
1) The event number of the event occurrence/restoration is displayed.
2) The event number is the No. set in "Tag event setting" of the event setting.

(c) Status
The occurrence/restoration of the event is displayed.

(d) Tag name
1) The name of the tag in which the event occurred/was restored is displayed.
2) The setting No. and tag names set in the tag setting are displayed in the tag name column.

(e) Component name
1) The name of the component in which the event occurred/was restored is displayed.
2) The setting No. and component names of "Component setting" in the tag setting are displayed in the component name column.

(f) Condition
The monitor condition for the event occurrence/restoration is displayed.
=, <>, >=, >, <, <=

(g) Trigger value
The trigger value for the event occurrence/restoration is displayed.

(h) Component value
The component value at the time of the event occurrence/restoration is displayed.

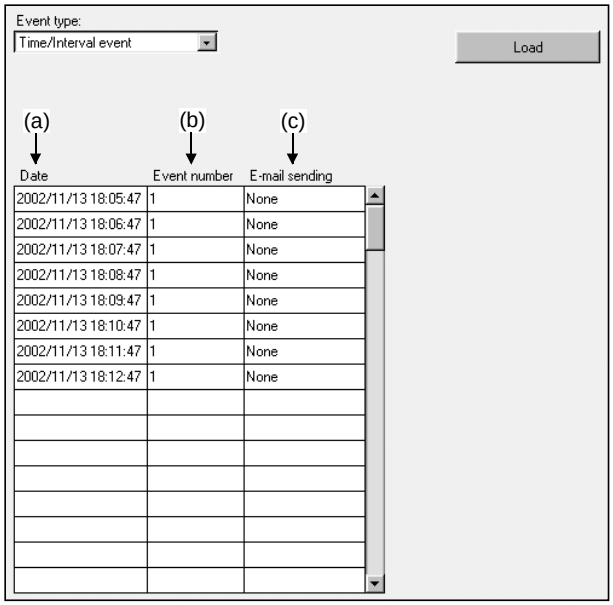
(i) E-mail sending
The e-mail transmission status due to event occurrence is displayed.

Item	Description
None	E-mail transmission has not set for the event that occurred.
Sending	E-mail is being sent according to the setting for the event that occurred.
Complete	E-mail was sent according to the setting for the event that occurred.
ERR****h (＊indicates the error code)	Since an error occurred, e-mail transmission failed.

(4) Time/Interval event

The time/interval event history is monitored.

The contents of /ROM/WWW/EVENT/TIMWATCH.CSV are displayed.



(a) Date

The date and time when the event occurred is displayed.

(Example) 2002/08/05 08:58:17

(b) Event number

1) The event number of the event occurrence is displayed.

2) The event number is the No. set in "CPU event setting" of the event setting.

(c) E-mail sending

The e-mail transmission status due to event occurrence is displayed.

Item	Description
None	E-mail transmission has not set for the event that occurred.
Sending	E-mail is being sent according to the setting for the event that occurred.
Complete	E-mail was sent according to the setting for the event that occurred.
ERR****h (＊indicates the error code)	Since an error occurred, e-mail transmission failed.

6.2.5 PLC diagnostics monitor

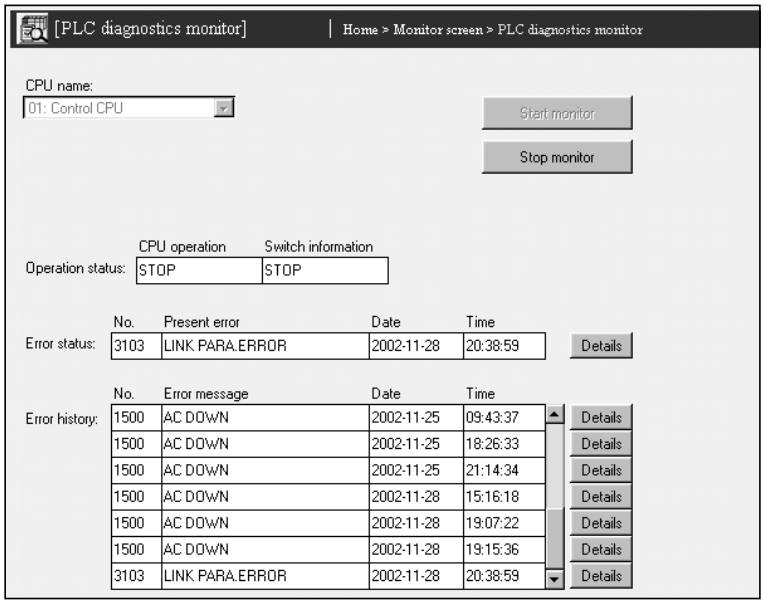
[Setting Purpose]

This monitoring function is used to monitor the operating status/error information of the PLC CPU.

[Start Procedure]

[Monitor screen] → "PLC diagnostics monitor"

[Setting screen]



[Setting Item]

Item	Description
CPU name	Selects the access target CPU.
Operation status	Displays the operation status and switch status of the PLC CPU.
Error status	Displays the current error status.
Error history	Displays the error history.
Start monitor	Starts PLC diagnostics monitor.
Stop monitor	Stops PLC diagnostics monitor.
Details	Displays the details of an error.

POINT

For the error definition/corrective action of the error code, refer to the User's Manual (Hardware Design, Maintenance and Inspection) of the CPU module or Help of GX Developer.

(1) CPU name

(a) Set the access target CPU.

(b) Select the CPU name set in the access target CPU setting.
(Refer to Section 4.6.7 for the access target CPU setting.)

(c) The CPU name drop-down list displays the setting No. and CPU names of the access target CPU setting.
(Example) 01: Control CPU

(d) By default, the host CPU of the Web server module is set as the access target CPU setting No. 1.

(2) Operation status

The operation status and switch information of the PLC CPU are displayed.

(3) Error status

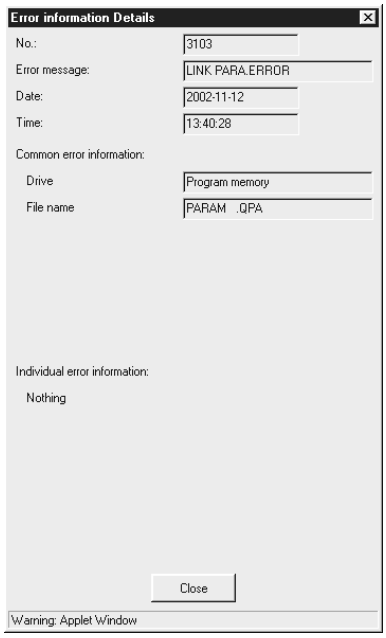
The current error status and the time of error occurrence are displayed.

(4) Error history

The history of up to 16 errors is displayed.

(5) Details

The details (error code No., error message, etc.) of the error are displayed.



6.2.6 Self-diagnostics monitor

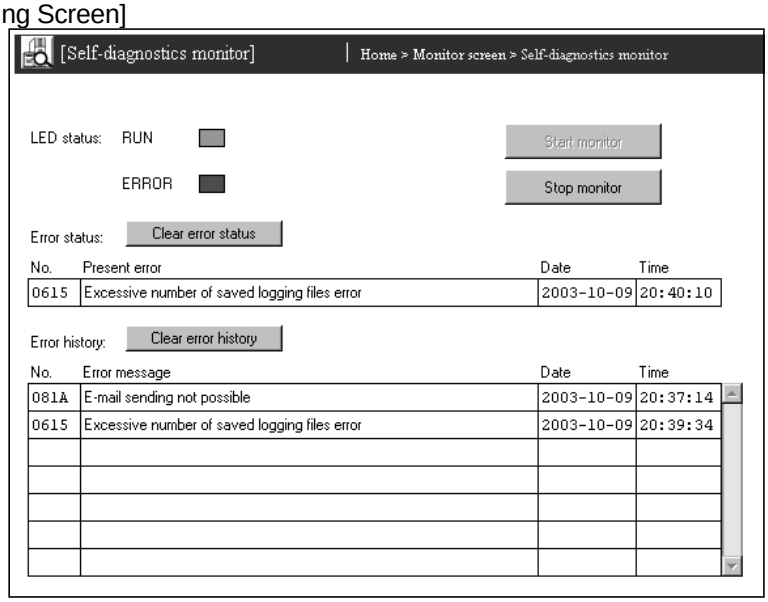
[Setting Purpose]

Self-diagnostics monitor monitors the LED status and error status of the Web server module.

[Start Procedure]

[Monitor screen] → "Self-diagnostics monitor"

[Setting Screen]



[Setting Item]

Item	Description
LED status	Displays the LED status of the Web server module.
Error status	Displays the latest error code.
Clear error status	Turns off the ERR. LED and clears the error status.
Error history	Displays a history of errors.
Clear error history	Clears the error history.
Start monitor	Starts self-diagnostics monitor.
Stop monitor	Stops self-diagnostics monitor.

(1) LED status

- The LED status (RUN LED, ERR. LED) of the Web server module is displayed.
  Refer to Section 4.3 (1) for the LED indications.

(2) Error status

- The status of the current error area (address: 140 to 145) of the buffer memory is displayed.
  Refer to Section 9.3 for the error code.

(3) [Clear error status] button

- Turns off the ERR. LED, X10 to X19, and X1C.
- Clears the current error area (address: 140 to 145) of the buffer memory.
- Clears "Present Error" displayed in the system monitor of GX Developer. (Refer to Section 9.2.2.)
- A module stop error (ERR. LED flicker) cannot be cleared.

(4) Error history

- The status of the error log area (address: 150 to 247) of the buffer memory is displayed.
  Refer to Section 9.3 for the error code.

(5) [Clear error history] button

- Clears the error log area (address: 150 to 247) of the buffer memory.
- Clears "Error Display" displayed in the system monitor of GX Developer. (Refer to Section 9.2.2.)
- A module stop error (ERR. LED flicker) cannot be cleared.

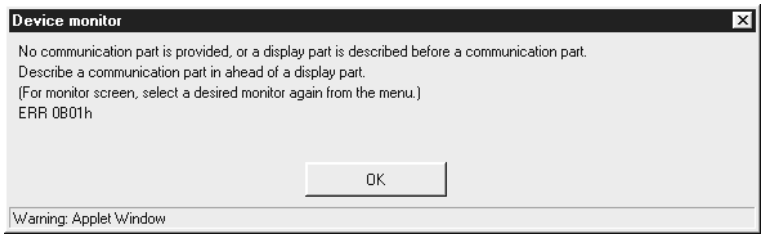
6.2.7 Precautions for using monitor function

This section explains the precautions for using the monitor function.

(1) Precautions for displaying the monitor screen

(a) Since the monitor screens use the Java applet, Java VM is required for the Web browser to execute the applet.
Refer to Section 3.1 Remarks (2) (3) for how to download Java VM.

(b) Start of each monitor screen may take a little while.
When displaying a monitor screen on the Web browser, do not switch the monitor screen to another until it is displayed completely.
Failure to observe this instruction may cause an error (error code: B01H), and the following screen appears.
To display the monitor screen, select the monitor screen from the monitor screen menu again.

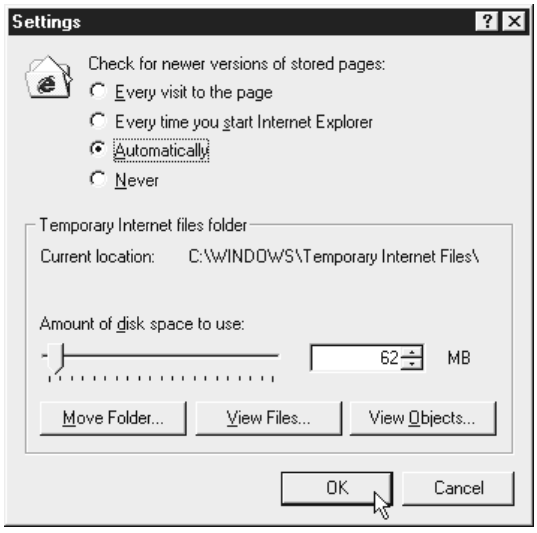

Device monitor
No communication part is provided, or a display part is described before a communication part.
Describe a communication part in ahead of a display part.
(For monitor screen, select a desired monitor again from the menu.)
ERR 0B01h
OK
Warning: Applet Window

(c) If communication is interrupted due to some reason while monitoring the system from a monitor screen, or if monitoring is executed before connecting the Web server module to the network, the monitor screen may not be correctly displayed on the Web browser even after restoration or restart of communications.
To display the monitor screen, select the relevant screen from the monitor screen menu again or restart the Web browser to execute the monitoring.

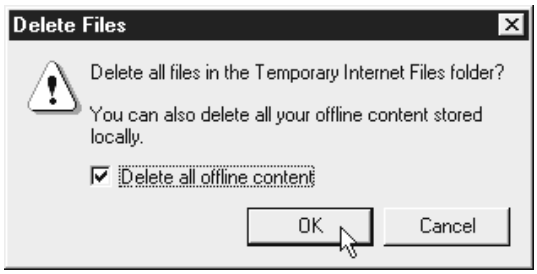
(d) Temporary Internet files settings/delete

1) Select any other than "Never" for "Check for newer versions of stored pages" in temporary Internet files settings of the Web browser.
If "Never" is set, the old screen (the one saved in the temporary Internet files) is displayed unchanged when the file is read from the Edit screen, etc.

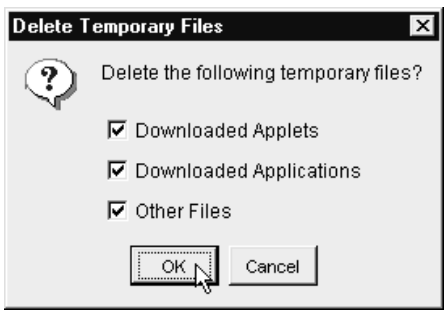
(Example) In the case of Microsoft® Windows® 98 operating system or Microsoft® Corporation's Internet Explorer 5.5
[Tools] → [Internet Options] → <General> tab → Temporary Internet Files Settings... → "Settings" Screen



2) The old screen (the one saved in the temporary Internet files) may be displayed unchanged if the file is read from the User HTML, Edit screen, etc.
In that case, delete the temporary Internet files (cache) of the Web browser and read the file again.
(Example) In the case of Microsoft® Windows® 98 operating system or Microsoft® Corporation's Internet Explorer 5.5
[Tools] → [Internet Options] → <General> tab → Temporary Internet Files Delete Files... → "Delete Files" Screen


Delete Files
Delete all files in the Temporary Internet Files folder?
You can also delete all your offline content stored locally.
Delete all offline content
OK
Cancel

(Example) When using Java VM of Sun Microsystems Inc. for <applet>
[Control Panel] → [Java] → <General> tab → Delete Files → "Delete Temporary Files" Screen



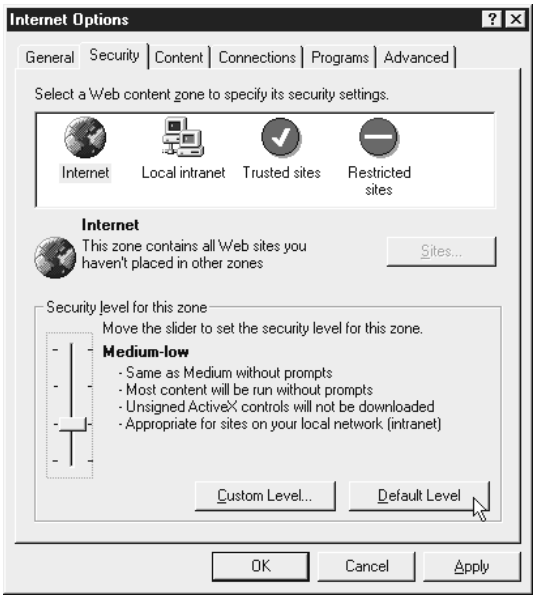
POINT
To shorten the page display time, the Web browser saves one-displayed pages in a special folder (temporary Internet files).

(e) Security level setting

In the security level setting of the Web browser, set the security level of the Internet and Intranet zones to "Default Level".

(Example) In the case of Microsoft® Windows® 98 operating system or Microsoft® Corporation's Internet Explorer 5.5

[Tools] → [Internet Options] → <Security> tab

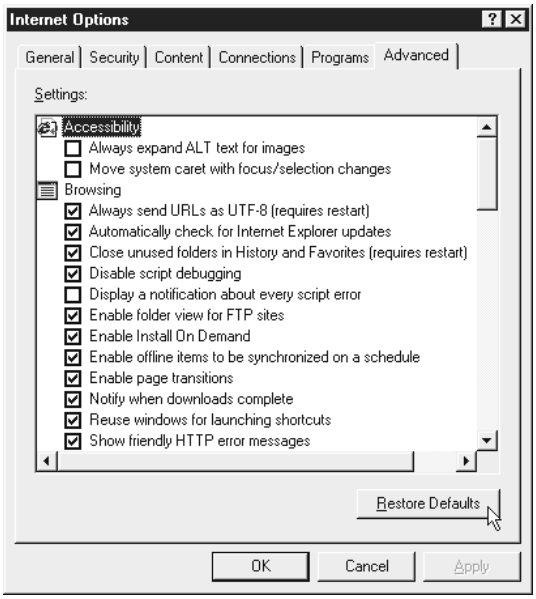


(f) Detailed setting

In the advanced settings of the Web browser, set to "Restore Defaults".

(Example) In the case of Microsoft® Windows® 98 operating system or Microsoft® Corporation's Internet Explorer 5.5

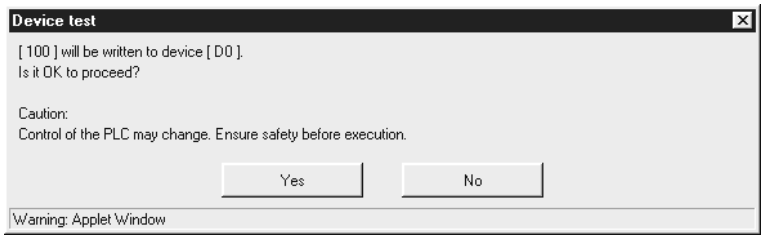
[Tools] → [Internet Options] → <Advanced> tab



(2) Precautions for executing the device test/tag component test

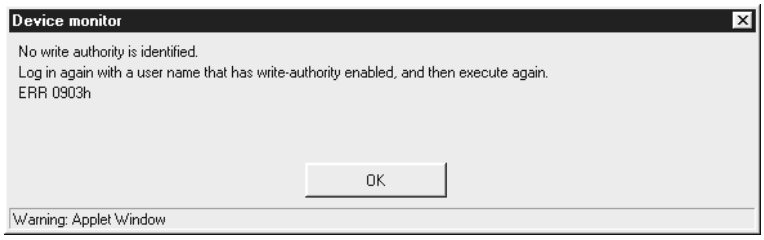
(a) The device test/tag component test may affect the control of the PLC CPU. Ensure safety before execution.

(Example) When the device test is executed


Device test
[100] will be written to device [D0].
Is it OK to proceed?
Caution:
Control of the PLC may change. Ensure safety before execution.
Yes
No
Warning: Applet Window

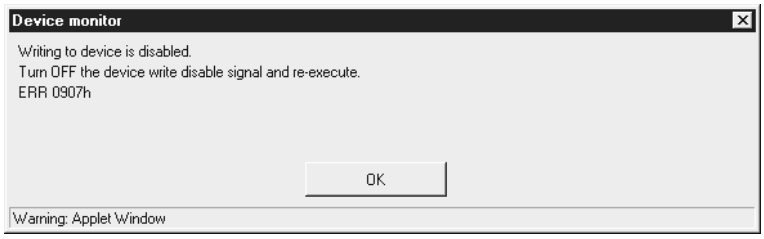
(b) A user without device write/tag component write authority is not allowed to conduct the device test/tag component test.
When the device test/tag component test is attempted, the following screen appears.

(Example) When the device test is attempted

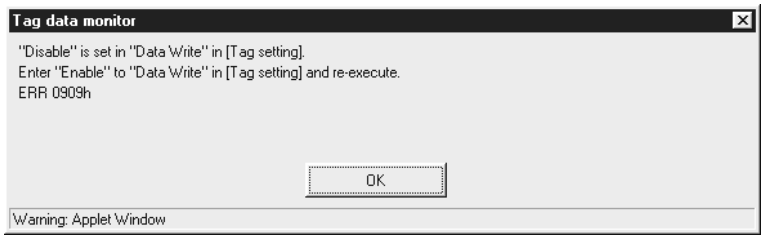

Device monitor
No write authority is identified.
Log in again with a user name that has write-authority enabled, and then execute again.
ERR 0903h
OK
Warning: Applet Window

(c) When Device write disable request (YA) has been set to "Disable", the device test/tag component test is not available.
When the device test/tag component test is attempted, the following screen appears.

(Example) When the device test is attempted



(d) When "Data write" of the tag setting has been set to "Disable", the tag component test is not available. (Refer to Section 6.3.3 for the tag setting.)
When the tag component test is attempted, the following screen appears.


Tag data monitor
"Disable" is set in "Data Write" in [Tag setting].
Enter "Enable" to "Data Write" in [Tag setting] and re-execute.
ERR 0909h
OK
Warning: Applet Window

6.3 Tag Function

6.3.1 Tag function

The tag function is designed to store a set device data of individual PLC CPUs on the network as a tag, and collect those device data in tag unit.

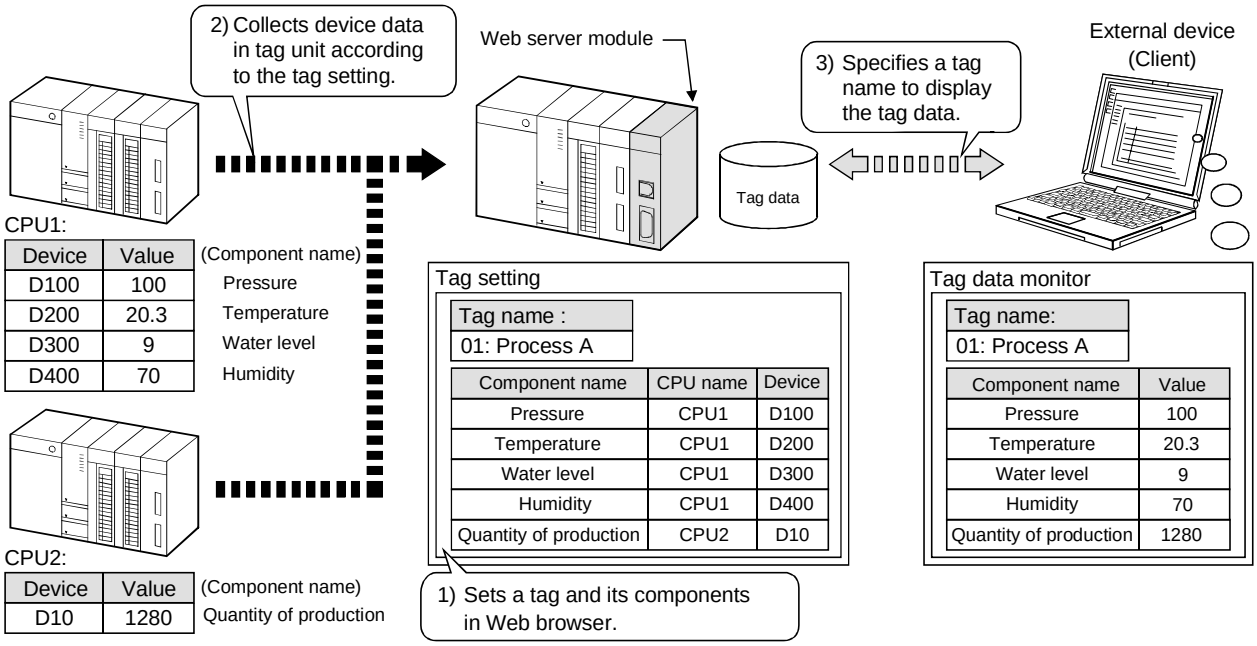
(1) Tag

(a) A tag is a data table contains a set of data (components) required to access the device data of the PLC CPUs on the network.

(b) For component, set the communication path, data type, device, etc. required to access the device data of individual PLC CPUs.

(c) The Web server module collects device data in tag unit at an interval defined in the tag.

(d) The tag data collected by the Web server module can be monitored from the Web browser by specifying the tag name.



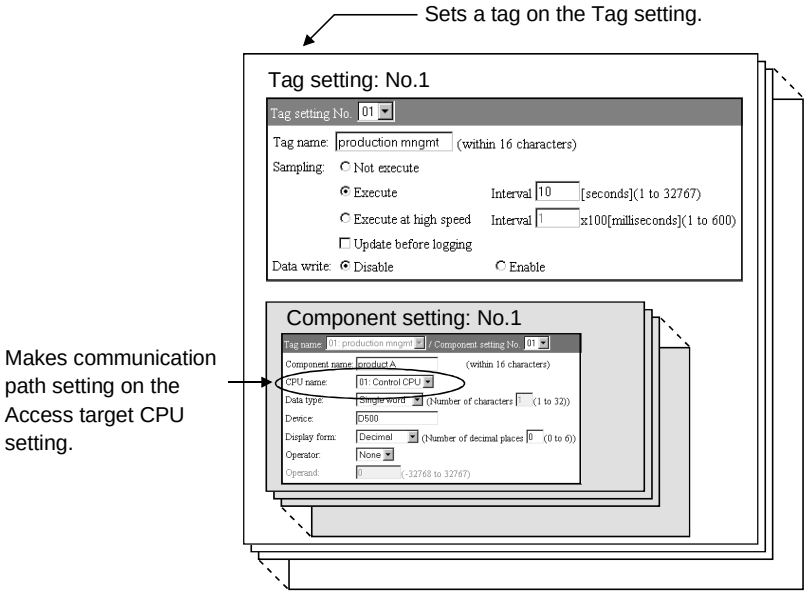
(2) Tag setting

(a) Set a tag in the tag setting of the Administrative menu. (Refer to Section 6.3.3)

(b) Up to 64 tags can be registered.

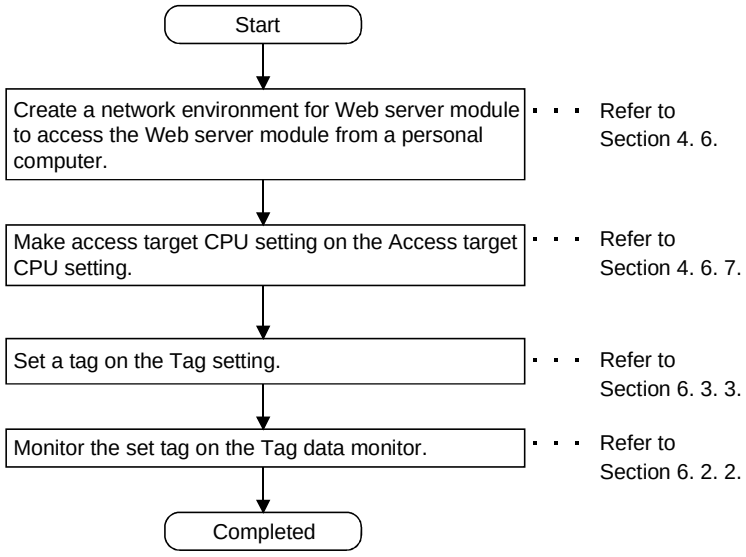
(c) Up to 64 components can be registered for each tag.

(d) Set the communication path to access the PLC CPU in the access target CPU setting. (Refer to Section 4.6.7 for the access target CPU setting.) When setting the component, specify the communication path (CPU name) set in the access target CPU setting.


Sets a tag on the Tag setting.
Tag setting: No.1
Tag setting No. 01
Tag name: production mngmt (within 16 characters)
Sampling: Not execute
Execute Interval 10 [seconds](1 to 32767)
Execute at high speed Interval 1 x100[milliseconds](1 to 600)
Update before logging
Data write: Disable Enable
Component setting: No.1
Tag name: 01: production mngmt / Component setting No. 01
Component name: product A (within 16 characters)
CPU name: 01: Control CPU
Data type: Single word (Number of characters 1 (1 to 32))
Device: D500
Display form: Decimal (Number of decimal places 0 (0 to 6))
Operator: None
Operand: 0 (-32768 to 32767)
Makes communication path setting on the Access target CPU setting.

6.3.2 Setting procedure for tag function

The setting procedure for using the tag function is given below.

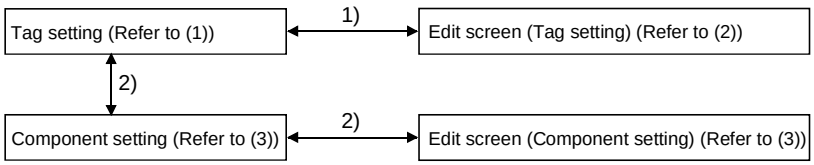

Start
Create a network environment for Web server module to access the Web server module from a personal computer.
Refer to Section 4. 6.
Make access target CPU setting on the Access target CPU setting.
Refer to Section 4. 6. 7.
Set a tag on the Tag setting.
Refer to Section 6. 3. 3.
Monitor the set tag on the Tag data monitor.
Refer to Section 6. 2. 2.
Completed

6.3.3 Tag setting

[Setting Purpose]

1) In the tag setting, set a tag.
   On the Edit screen (Tag setting), set the tag name, tag collecting interval, etc.
2) In the component setting, set components for each tag.
   On the Edit screen (Component setting), set the access target CPU, data type, device, etc.

[Start Procedure]

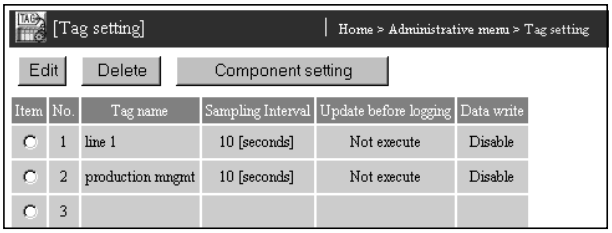


1) Tag setting
   [Administrative menu] → "Tag setting" → Select Tag setting No. and click on Edit → "Edit screen" (Tag setting)
2) Component setting
   [Administrative menu] → "Tag setting" → Select Tag setting No. and click on Component setting → "Component setting" → Click on Add/Select component setting No. and click on Edit → "Edit screen (Component setting)"

(1) Tag setting

Make tag setting.
Up to 64 tags can be set.

[Setting screen]



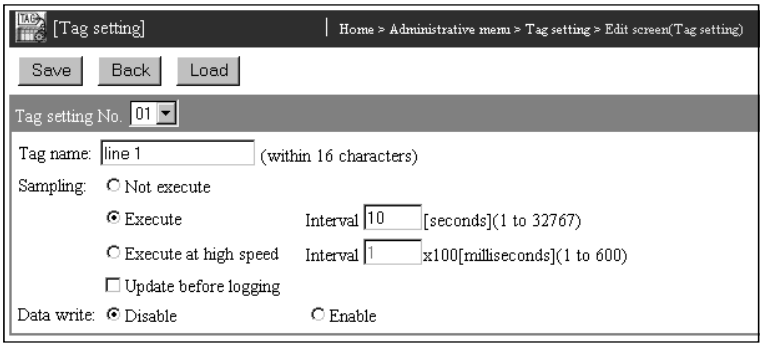
[Setting Item]

Item	Description
Item	Selects the tag No. that will be edited or deleted or whose component will be set.
Tag name	Displays tag names.
Sampling interval	Displays the collecting cycle of the tag data.
Update before logging	Displays Whether tag collecting is executed or not before logging.
Data write	Displays Whether data can be written to the tag or not.
Edit	Edits the selected tag.
Delete	Deletes the selected tag.
Component setting	Sets the component of the selected tag. (Refer to (3))

(2) Edit screen (Tag setting)

Set the tag name, tag collecting interval (Sampling), etc.

[Setting screen]


[Tag setting]
Home > Administrative menu > Tag setting > Edit screen(Tag setting)
Save
Back
Load
Tag setting No. 01
Tag name: line 1 (within 16 characters)
Sampling: Not execute
Execute Interval 10 [seconds](1 to 32767)
Execute at high speed Interval 1 x100[milliseconds](1 to 600)
Update before logging
Data write: Disable Enable

[Setting Item]

Item	Description
Tag name	Sets the tag name. (within 16 characters)
Sampling	Sets the collecting interval of the tag data.
Data write	Sets whether data can be written to the tag or not.
Save	Saves the setting. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.
Back / Cancel	Discards the changed setting and returns to the Tag setting screen.
Select tag setting No. and click on Load	Loads the parameters of the No. selected in tag setting No. and displays them on the Edit screen.

(a) Tag name (within 16 characters)

1) Set the tag name.
2) For tag data monitoring, logging setting, etc., specify the tag name set in this setting.
3) Refer to Appendix 4 (5) for the characters applicable to the tag name.

(b) Sampling

Select the tag collection method from among any of the following 1) to 3) and 4).

1) Not execute (*1)
   - Tag data are not collected.
   - Select this item when executing tag collection with the dedicated instruction TAG or when making setting only and not executing tag collection.
2) Execute (Sampling interval: 1 to 32767s) (*1)
   Tag data are collected once when the Web server module is started or the setting is updated, and thereafter are collected at the specified interval.
3) Execute at high speed (Sampling interval: 1 to 600 ×100ms)
   Tag data are collected once when the Web server module is started or the setting is updated, and thereafter are collected at the specified interval.

4) Update before logging.
- When this setting is valid, tag collection is executed before logging, regardless of the settings of the above 1) to 3).
- Set this item when it is desired to execute tag collection in synchronization with logging.

*1 Regardless of this setting, tag collection is performed when the dedicated instruction TAG is executed.

POINT

Take the following precautions when "Execute at high speed" is selected.
(1) Be sure to create a user setting system area in the program memory of the control CPU. (Refer to Remarks in this section.)
(2) "Execute at high speed" can be registered to only one tag. (Multiple setting not allowed)
(3) The access target CPU of the tag component that selected "Execute at high speed" is the access target CPU setting No. 1 (control CPU). (Fixed)
(4) The device of the tag component that selected "Execute at high speed" can be set within a total of 96 points.
(Example) When the component data types are all set to "Double word (2 points)", up to 48 component settings can be registered.

(c) Data write: Disable/Enable
1) Set whether data can be written to the tag or not.
Disable: Write to the tag data (device) is disabled.
Enable: Write to the tag data (device) is enabled.
2) When "Disable" is selected, the data cannot be written from "Tag component test" in the Tag data monitor or the user screen (write part).

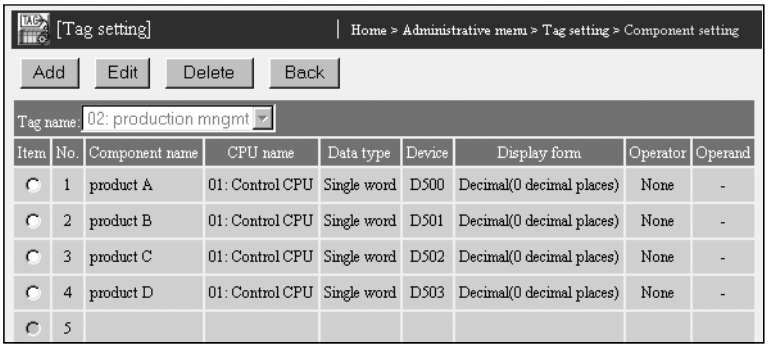
POINT

After changing the settings, make sure to click on the "Save" button.
The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.

(3) Component setting

Set components for each tag.
Up to 64 components can be registered for each tag.
Component setting is registered in order of serial numbers starting from the setting No. 1.
Component registration is not valid with any omitted setting.

[Setting screen]



Item	No.	Component name	CPU name	Data type	Device	Display form	Operator	Operand
○	1	product A	01: Control CPU	Single word	D500	Decimal(0 decimal places)	None	-
○	2	product B	01: Control CPU	Single word	D501	Decimal(0 decimal places)	None	-
○	3	product C	01: Control CPU	Single word	D502	Decimal(0 decimal places)	None	-
○	4	product D	01: Control CPU	Single word	D503	Decimal(0 decimal places)	None	-
○	5							

[Setting Item]

Item	Description
Tag name	Displays the setting No. and name of the tag being edited.
Item	Selects the component No. that will be edited or deleted.
Component name	Displays the component name.
CPU name	Displays the access target CPU.
Data type	Displays the data type to be collected.
Device	Displays the device data to be collected.
Display form	Displays the display form of the real number.
Operator	Displays whether a mathematical operation is specified for the collected data or not, or the specified mathematical operation.
Operand	Displays the addend, subtrahend, multiplier or divisor of the mathematical operation.
Add	Adds an component. Clicking on the "Add" button displays the setting edit screen for new component (next No. after the last component). (In the case of the above screen, the edit screen for setting No. 5 is displayed.)
Edit	Edits the selected component.
Delete	Deletes the selected component. The settings of the components after the deleted setting No. are shifted up. (*) * When the component has been set with the user part of the user screen creation function, reexamine the parameters since the setting No. is changed. (Refer to Chapter 7 for the user part.)

POINT

(1) Before making component setting, it is required to make tag setting on the "Edit screen (Tag setting)".

(2) If any component has a wrong device number in the component setting, the other component that has a device of the same access target CPU will also result in an error.
Reexamine the device numbers set in the component setting.

[Component setting]

Component name	CPU name	Device	
A	01:Control CPU	D20000	← Wrong device number.
B	01:Control CPU	D0	
C	05:QCPU001	D100	

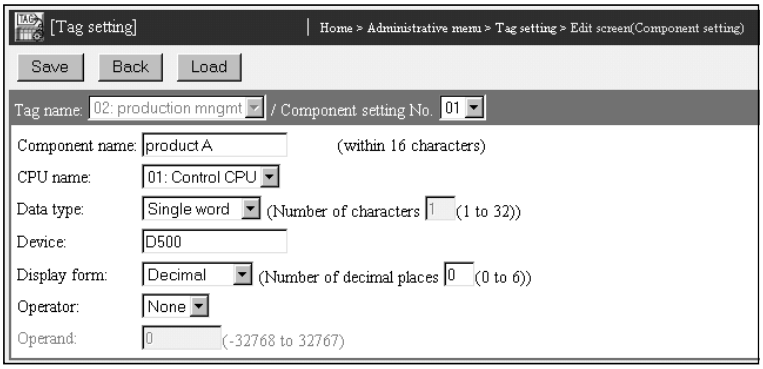
[Tag data monitor]

Component name	Value	
01:A	ERRFFFEh	← Device number error (FFFEh)
02:B	ERRFFFEh	← As component "A" of the same access target has an error, component "B" also results in error.
03:C	100	

(4) Edit screen (Component setting)

Set the access target CPU, data type, access device, etc.

[Setting screen]


[Tag setting]
Home > Administrative menu > Tag setting > Edit screen(Component setting)
Save
Back
Load
Tag name: 02: production mngmt / Component setting No. 01
Component name: product A (within 16 characters)
CPU name: 01: Control CPU
Data type: Single word (Number of characters 1 (1 to 32))
Device: D500
Display form: Decimal (Number of decimal places 0 (0 to 6))
Operator: None
Operand: 0 (-32768 to 32767)

[Setting Item]

Item	Description
Component name	Sets the component name. (within 16 characters)
CPU name	Sets the access target CPU name.
Data type	Sets the data type to be collected.
Device	Sets the device data.
Display form	Sets the display form of the real number.
Operator	Sets a mathematical operation to be performed for the collected data, or no mathematical operation to be performed.
Operand	Set the numeric value to be mathematically operated for the collected data.
Save	Saves the setting. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC powered off and then on, or the CPU module is reset.
Back / Cancel	Discards the changed setting and returns to the Tag setting screen.
Tag name	Displays the tag setting No. and tag name being edited.
Select component setting No. and click on Load	Loads the parameters of the No. selected in component setting No. and displays them on the Edit screen. Up to "setting number + 1" can be selected.

(a) Component name (within 16 characters)
1) Set the component name.
2) Refer to Appendix 4 (5) for the characters applicable to the component name.

(b) CPU name
1) Set the access target CPU.
2) Selects the CPU name set in the access target CPU setting.
(Refer to Section 4.6.7 for the access target CPU setting.)
3) The CPU name drop-down list displays the setting No. and CPU names of the access target CPU setting.
(Example) 01: Control CPU
4) By default, the host CPU of the Web server module is set as the access target CPU setting No. 1.
5) When "Sampling: Execute at high speed" is selected in the tag setting, the access target CPU setting No. 1 (control CPU) must be set. (Fixed)

(c) Data type
1) Select the data type of the collected data (device data).
Single word : Set for data of single word.
Double word : Set for data of double word.
Real number : Set for data of real number.
Bit : Set for bit data (Enabled for bit device)
String : Set for character string. (*)
2) For a word device, Single word, Double word, Real number or String can be selected.
For a bit device, Bit can be selected.
3) When "Bit" has been selected, data in 1-bit unit (0/1) is handled.
4) When "String" has been selected, set the number of characters. (1 to 32 bytes)
* When the data type is "String", the device value is as described below.
- When the device value is not ASCII code, it is replaced by a "." (period: $2E_H$).
- When the device value is a "," (comma: $2C_H$), it is replaced by a "." (period: $2E_H$). (To differentiate it from the delimiter of the CSV file)
- When the device value is a termination character (NULL code: 00_H), the subsequent character data are ignored. (The character string is regarded as completed.)

(d) Device
1) Specify the device type and actual device number.
2) Device specification by qualification (indexing, digit specification, bit specification to word device) is not available.
3) Refer to Appendix 2 for the accessible devices.
4) When "Sampling: Execute at high speed" is selected in the tag setting, set the device within a total of 96 points.

(e) Display form
1) Set the display form of the real number.
Decimal/Exponential
2) Set the number of decimal places. (0 to 6)
3) Enabled when the data type is either of the following.
• Real number type
• Single word/Double word (After operation, a numeric value below decimal point may be produced.)

(f) Operator
Set a mathematical operation to be performed for the collected data, or no mathematical operation to be performed.
(None, +, -, ∗, /)

(g) Operand
Set the numeric value to be mathematically operated for the collected data.
(-38768 to 32767)

POINT

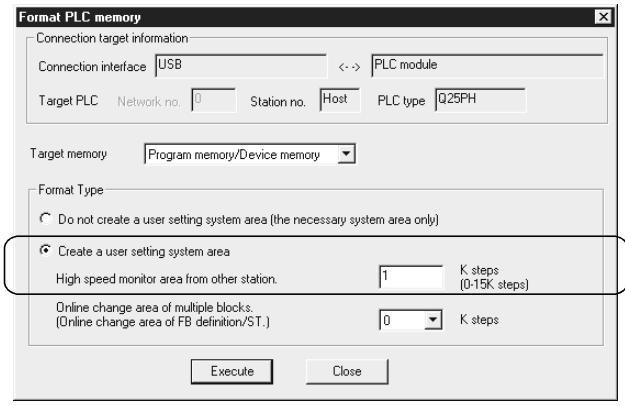
(1) When collecting multiple device data of the same PLC CPU, registering them as the components of the same tag will make the collecting operation more efficient than registering them to different tags.
(2) After changing the settings, make sure to click on the "Save" button.
The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.

REMARK

(1) How to create user setting system area
The following provides how to create a user setting system area in the program memory of the control CPU.

[Start Procedure]
GX Developer → [Online] → "Format PLC memory"

[Operation Procedure]
1) Select "Create a user setting system area" as the Format Type on the Format PLC memory screen.
2) Secure 1K step of "High speed monitor area from other station" for each Web server module. (∗1)
3) Format the PLC memory.

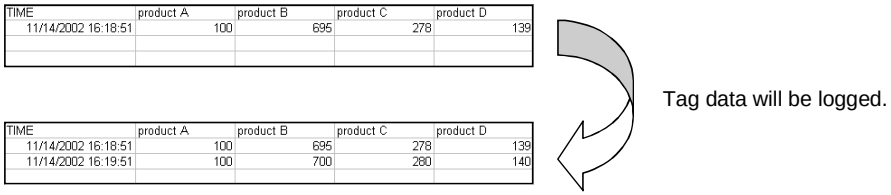


∗1 The area size of 1K step is required per Web server module separately from the area used for GX Developer and/or GOT.

6.4 Logging Function

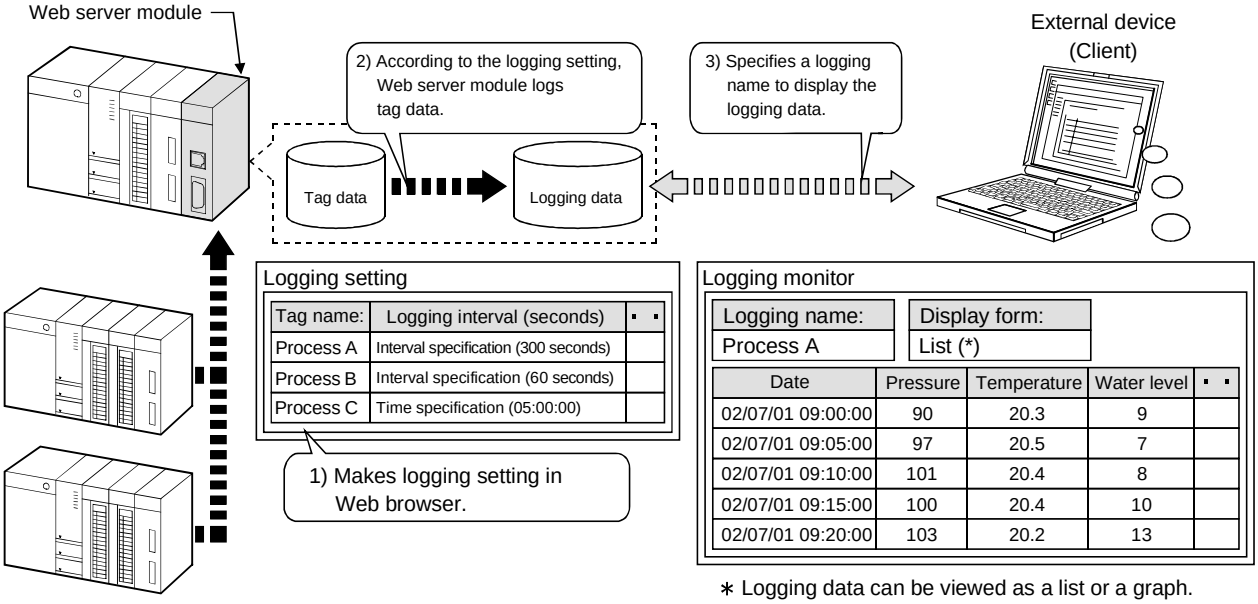
6.4.1 Logging function

The logging function stores tag data as a CSV format logging file into standard ROM or Compact Flash™ card in time series at the user-specified execution timing (by setting timing, start/stop condition).



(1) Logging file can be monitored/downloaded

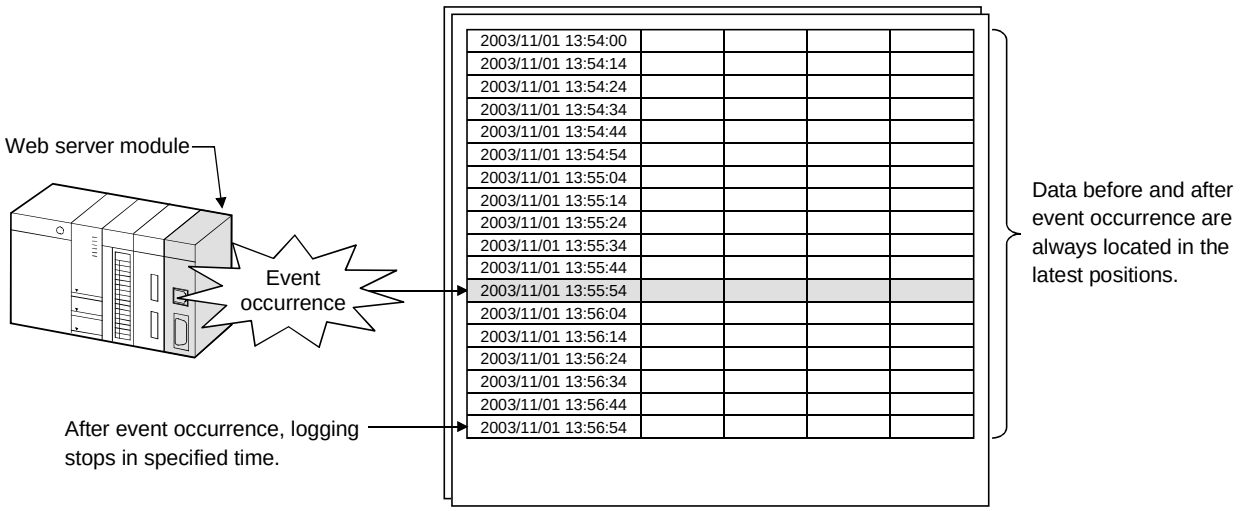
The logging file can be monitored on the logging monitor screen.
Also, the logging file can be sent to the external device by downloading it from the logging monitor screen or using E-mail delivery/file transfer.



∗ Logging data can be viewed as a list or a graph.

(2) Logging data before and after event occurrence can be stored

By setting the occurrence of an event as the start/stop condition of logging, logging data before and after event occurrence can be stored.
This enables only necessary data to be stored without the logging data before and after event occurrence being buried in the file.



POINT

Since the tag data collected by the Web server module are logged, it is required to make tag setting in advance when using the logging function.

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6.4.2 Logging file

This section explains logging files.

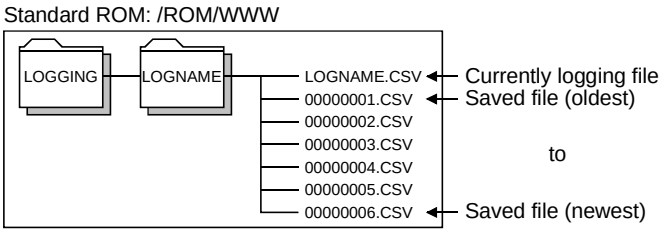
(1) Where logging files are saved

(a) Logging files are stored into standard ROM or Compact Flash™ card.

(b) When a logging file is created, the directory of the file name set at "File name" in the logging setting is created under the following directory, and the logging file is stored there.

1) When standard ROM is specified : /ROM/WWW/LOGGING
2) When Compact Flash™ card is specified : /CF/LOGGING

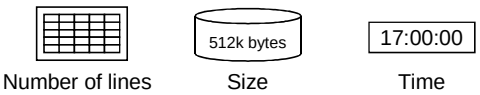
(Example) When the logging file of file name "LOGNAME" is stored into standard ROM



(2) File capacity and processing performed when file becomes full

(a) File capacity

The capacity of a logging file is determined by any of the following.



(b) What file becomes full means

Indicates that the currently logging file has reached the specified file capacity and no more data can be written to that file. (*1)

*1 Regardless of the file capacity setting, a file becomes full when:

- The number of lines reaches 10000;
- The file size reaches 512k bytes; or
- Any tag setting (number of components, component name) change is made to the file that is executing logging.

(c) Processing performed when file becomes full

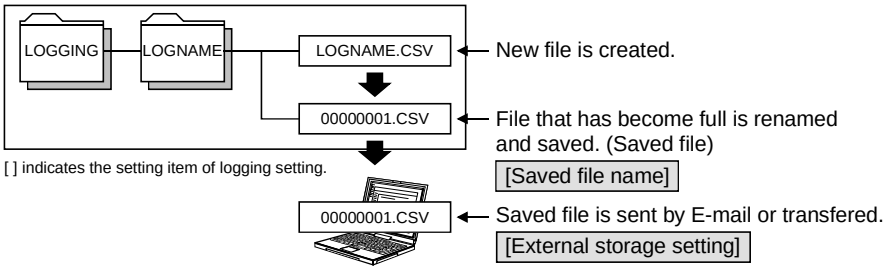
1) Creating new file and saving current file
When the currently logging file becomes full, a new file is created.
The file that has become full is renamed and saved. (Creation of saved file)

2) Saved files names
Saved files names are consecutively numbered with 8 digits (hexadecimal).
By setting the "Saved files names" in the logging setting, the name, date and time can be added to the saved file name.

(Example) LOGNAME_20030702_201230_00000001.CSV

Name Date Time Serial number (8-digit hexadecimal)
(Serial number is always added)

3) When storing saved file into external device
By setting "External storage setting" in the logging setting, the saved file can be sent by E-mail or transfered when it is stored.

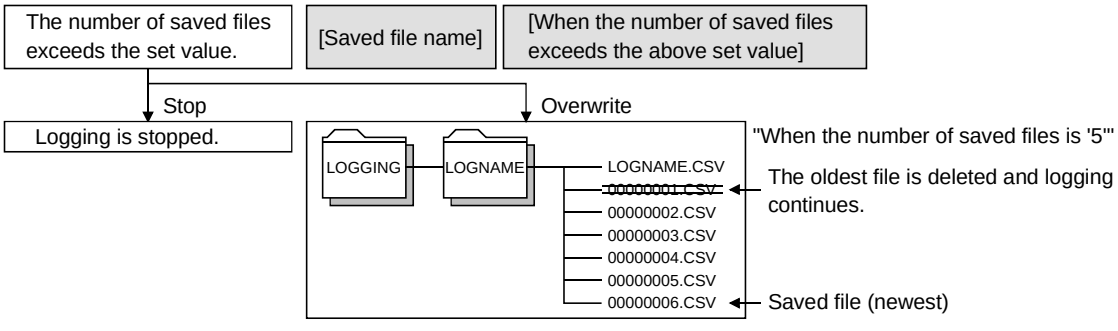


(3) When the number of saved files exceeds the set value

When the number of saved files exceeds the set value, operation is performed according to the setting of "When the number of saved files exceeds the above set value" in the logging setting.

(a) When "Overwrite" is selected
Deletes the oldest file and keeps on logging.

(b) When "Stop" is selected
Stops logging.
A logging saved file number over error (615h) occurs. (Refer to Section 9.3.)



[ ] indicates the setting item of logging setting.

(4) File format

The file format of a logging file is shown below.

	TIME		Component name 1		Component name 2		Component name 3		Component name 4		Component name 5	
*1 →	2002/07/01 09:00:00	,	1	,	100	,	123	,	2.123	,	1280	[CR+LF]
	2002/07/01 09:05:00	,	2	,	97	,	125	,	2.544	,	1280	[CR+LF]
	2002/07/01 09:10:00	,	3	,	101	,	125	,	2.343	,	2300	[CR+LF]
	2002/07/01 09:15:00	,	4	,	100	,	123	,	2.438	,	3504	[CR+LF]
	2002/07/01 09:20:00	,	5	,	103	,	126	,	2.397	,	5034	[CR+LF]

Number of components (Max. 64)

(Example) CSV file display

TIME	product A	product B	product C	product D
11/14/2002 16:18:51	100	695	278	139
11/14/2002 16:19:51	100	700	280	140
11/14/2002 16:20:51	100	705	282	141
11/14/2002 16:21:51	100	710	284	142
11/14/2002 16:22:51	100	715	286	143

*1 When the tag whose data are collected at high speed is selected, the data are displayed in 100ms units.

(Example) 2003/07/01 09:00:00.1

100ms units (for high speed collection only)

(5) Precautions for displaying CSV file on spreadsheet software

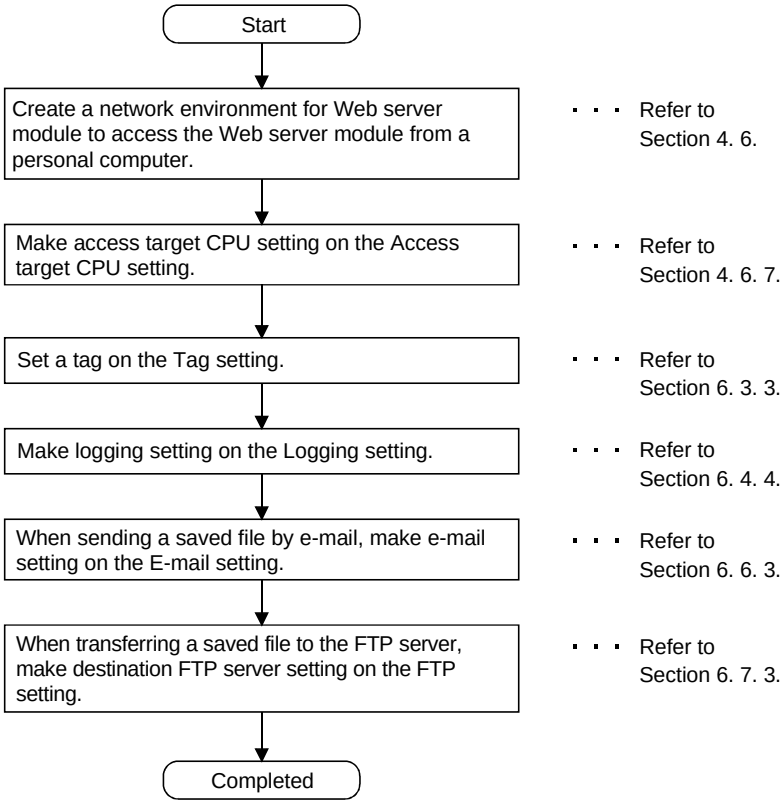
When a CSV file is opened on spreadsheet software, data of date, time and some characters such as "=, +, -, %" may not be correctly displayed due to data conversion.

In this case, first open the CSV file with a text editor and confirm that the logging data are contained correctly.

Then, confirm the specifications of the spreadsheet software and make setting so that the file is displayed correctly.

6.4.3 Setting procedure for logging function

The setting procedure for use of the logging function is indicated below.


Start
Create a network environment for Web server module to access the Web server module from a personal computer.
Refer to Section 4. 6.
Make access target CPU setting on the Access target CPU setting.
Refer to Section 4. 6. 7.
Set a tag on the Tag setting.
Refer to Section 6. 3. 3.
Make logging setting on the Logging setting.
Refer to Section 6. 4. 4.
When sending a saved file by e-mail, make e-mail setting on the E-mail setting.
Refer to Section 6. 6. 3.
When transferring a saved file to the FTP server, make destination FTP server setting on the FTP setting.
Refer to Section 6. 7. 3.
Completed

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6.4.4 Logging setting

[Setting Purpose]

Make the setting for logging tag data.

[Start Procedure]

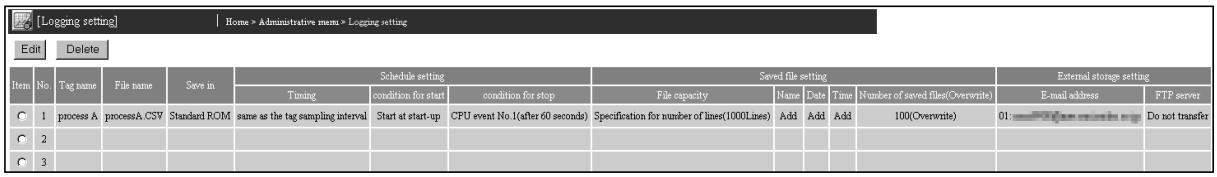
[Administrative menu] → "Logging setting" (refer to (1)) → Select logging setting No. and click on Edit → "Edit screen" (refer to (2))

(1) Logging setting

Make logging setting.

Up to 64 logging settings can be performed.

[Setting screen]



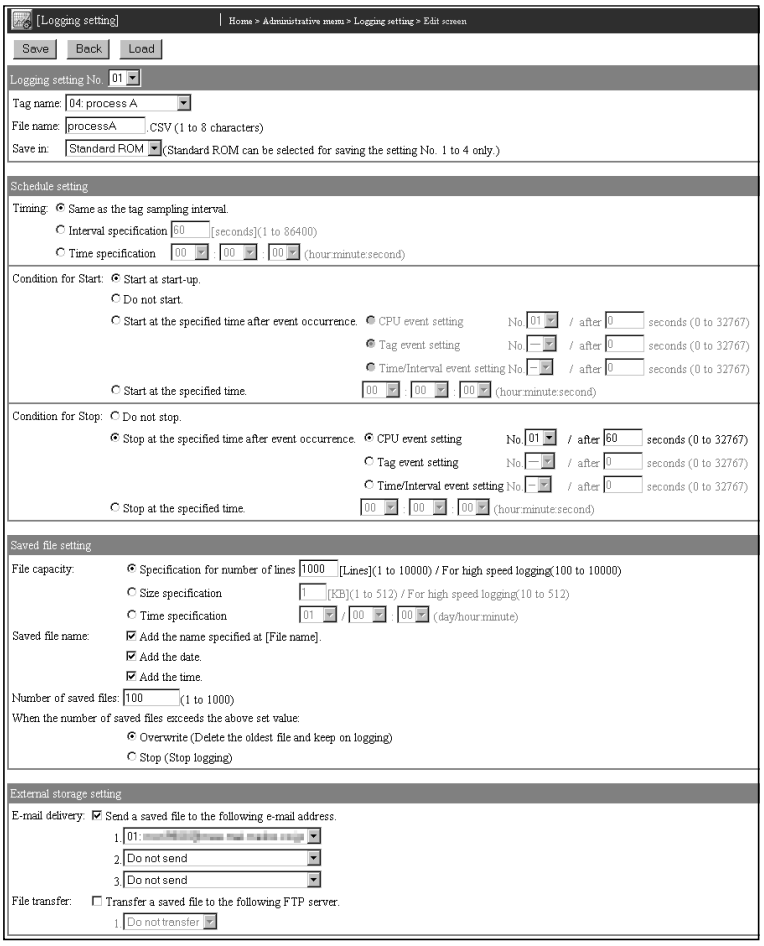
[Setting Item]

Item	Description
Item	Selects the logging No. to be edited or deleted.
Tag name	Displays the logged tag name.
File name	Displays the logging file name.
Save in	Displays the location where the logging file will be saved.
Schedule setting	Displays the execution timing and conditions for start/stop.
Saved file setting	Displays the file capacity, number of saved files, and operation performed when the number of saved files exceeds the set value.
External storage setting	Displays whether or not the saved file will be sent by E-mail delivery or file transfer.
Edit	Edits the selected logging.
Delete	Deletes the selected logging.

(2) Edit screen

Set the tag to be logged, execution timing, file capacity, etc.

[Setting screen]


[Logging setting]
Home > Administrative mem > Logging setting > Edit screen
Save
Back
Load
Logging setting No. 01
Tag name: 04: process A
File name: processA .CSV (1 to 8 characters)
Save in: Standard ROM (Standard ROM can be selected for saving the setting No. 1 to 4 only.)
Schedule setting
Timing: Same as the tag sampling interval.
Interval specification 60 [seconds](1 to 86400)
Time specification 00 : 00 : 00 (hour:minute:second)
Condition for Start: Start at start-up.
Do not start.
Start at the specified time after event occurrence. CPU event setting No. 01 / after 0 seconds (0 to 32767)
Tag event setting No. — / after 0 seconds (0 to 32767)
Time/Interval event setting No. — / after 0 seconds (0 to 32767)
Start at the specified time. 00 : 00 : 00 (hour:minute:second)
Condition for Stop: Do not stop.
Stop at the specified time after event occurrence. CPU event setting No. 01 / after 60 seconds (0 to 32767)
Tag event setting No. — / after 0 seconds (0 to 32767)
Time/Interval event setting No. — / after 0 seconds (0 to 32767)
Stop at the specified time. 00 : 00 : 00 (hour:minute:second)
Saved file setting
File capacity: Specification for number of lines 1000 [Lines](1 to 10000) / For high speed logging(100 to 10000)
Size specification 1 [KB](1 to 512) / For high speed logging(10 to 512)
Time specification 01 / 00 : 00 (day/hour:minute)
Saved file name: Add the name specified at [File name].
Add the date.
Add the time.
Number of saved files: 100 (1 to 1000)
When the number of saved files exceeds the above set value:
Overwrite (Delete the oldest file and keep on logging)
Stop (Stop logging)
External storage setting
E-mail delivery: Send a saved file to the following e-mail address.
1. 01:
2. Do not send
3. Do not send
File transfer: Transfer a saved file to the following FTP server.
1. Do not transfer

[Setting Item]

Item	Description
Logging setting	Sets the tag to be logged, logging file name, and the location where the logging file will be saved.
Schedule setting	Sets the execution timing and conditions for start/stop.
Saved file setting	Sets the file capacity, number of saved files, and operation performed when the number of saved files exceeds the set value.
External storage setting	Sets whether or not the saved file will be sent by E-mail or transfered.
Save	Saves the setting. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.
Back / Cancel	Discards the changed setting and returns to the Logging setting screen.
Select logging setting No. and click on Load	Loads the parameters of the No. selected in logging setting No. and displays on the Edit screen.

(a) Tag name
1) Set the tag name to be logged.
2) Select the tag name set in the tag setting.
(Refer to Section 6.3.3 for the tag setting.)
3) When using the logging function, it is required to set the tag in advance.
4) The tag whose data are collected at high speed can be selected in only one logging setting. (Multiple setting not allowed)
For the tag whose data are collected at high speed, its displayed tag name is followed by "(*)".
(Example) 04: Process A(*)

(b) File name
1) Set the file name of the logging file. (1 to 8 characters)
2) Refer to Appendix 4 (3) for the characters applicable to the file name.

(c) Save in
1) As the location where the logging file will be saved, select either the standard ROM or Compact Flash™ card.
2) The standard ROM can be selected for only the logging setting No. 1 to 4.
- For the logging setting No. 5 and later, the file saving location is fixed to the Compact Flash™ card.
- When the tag whose data are collected at high speed is selected, the file saving location is fixed to the Compact Flash™ card.

(d) Timing
As the logging execution timing, select any of the following. (*1)
1) Same as the tag sampling interval
- Logging is executed at the tag sampling interval.
- When the tag whose data are collected at high speed is selected, the timing is fixed to this timing.
2) Interval specification
Logging is executed once when the Web server module is started or the setting is updated, and thereafter is executed at the specified interval. (1 to 86400s)
3) Time specification
- Logging is executed at the specified time.
Hour: 0 to 23, "Per"
Minute: 0 to 59, "Per" (Per minute can be specified only when Per hour is specified)
Second: 0 to 59
- Logging is not executed when the Web server module is started.

*1 Regardless of this setting, logging is performed when the dedicated instruction LOG is executed.

POINT

(1) Depending on the setting of the tag sampling interval and logging timing, the data accumulated for up to the time length of the tag sampling interval are logged.
(Example) When the tag sampling interval is 10 seconds and the logging interval is 1 second, the tag data of up to 10 seconds earlier is logged.

(2) By selecting "Sampling: Update before logging." in the tag setting, tag data can be collected in synchronization with the logging timing.

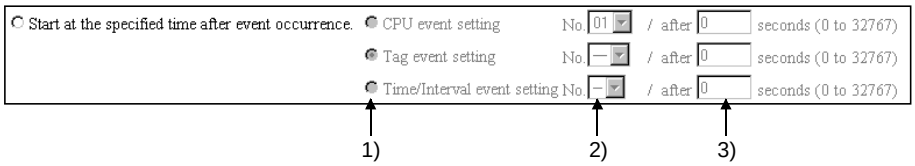
(3) By selecting "Same as the tag sampling interval" in the timing setting, logging can be performed at the tag sampling interval.

(e) Condition for Start (*1)
As the condition for starting logging, select any of the following.

1) Start at start-up.
- Logging starts when the Update button on the Setting update screen is clicked, or when the PLC is powered off and then on, or the CPU module is reset.
- Select this item for continuous logging.

2) Do not start.
- Logging is not started.
- Select this item when performing logging using the dedicated instruction LOG, or when making setting only and not executing logging.

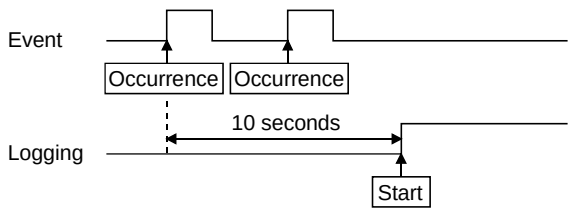
3) Start at the specified time after event occurrence.
Logging is started when the specified time (second) has elapsed after the specified event occurred.



1) Select any of the event types.
2) Select the event setting number.
3) Set the logging start time.
(Specify "0" when starting logging at event occurrence.)

POINT

When above 3) is set as the condition for start and the event set to the condition for start occurs twice before the specified time passes, the first event is valid as the condition for start.
(Example) When the condition for start is set to 10 seconds after event occurrence



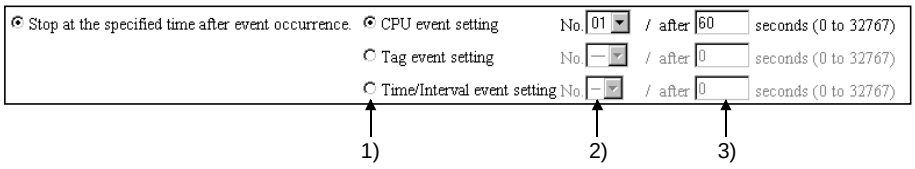
4) Start at the specified time.
Logging is started at the specified time.
Hour: 0 to 23, "Per"
Minute: 0 to 59, "Per" (Per minute can be specified only when Per hour is specified)
Second: 0 to 59

*1 Regardless of this setting, logging is performed when the dedicated instruction LOG is executed.

(f) Condition for Stop
As the condition for stopping logging, select any of the following.

1) Do not stop.
- Logging is not stopped.
- Select this item for continuous logging.

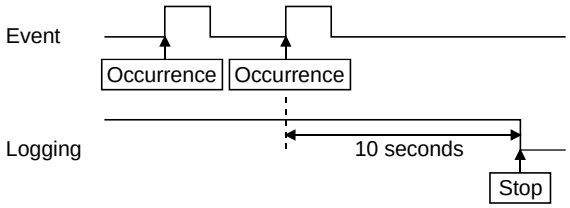
2) Stop at the specified time after event occurrence.
Logging is stopped when the specified time (second) has elapsed after the specified event occurred.



1) Select any of the event types.
2) Select the event setting number.
3) Set the logging stop time.
(Specify "0" when stopping logging at event occurrence.)

POINT

When above 2) is set as the condition for stop and the event set to the condition for stop occurs twice before the specified time passes, the second event is valid as the condition for stop.
(Example) When the condition for stop is set to 10 seconds after event occurrence



3) Stop at the specified time.
Logging is stopped at the specified time.
Hour: 0 to 23, "Per"
Minute: 0 to 59, "Per" (Per minute can be specified only when Per hour is specified)
Second: 0 to 59

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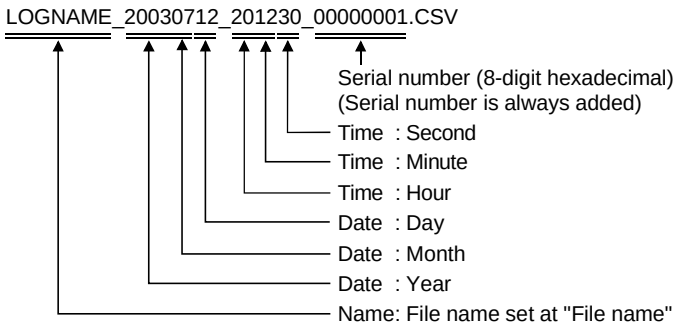
(g) File capacity
As the file capacity, select any of the following.
1) Specification for number of lines (1 to 10000 lines)/for high-speed logging (100 to 10000 lines)
2) Size specification (1 to 512k bytes)/for high-speed logging (10 to 512k bytes)
3) Time specification
Hour: 0 to 23, "Per"
Minute: 0 to 59, "Per" (Per minute can be specified only when Per hour is specified)
Second: 0 to 59

(h) Saved files names
As the data to be added to the saved file name, select any of the following. (Multiple selection allowed)
The data are added to the saved file name in order of 1) to 3).
1) Name (File name set at "File name")
2) Date (Year, month, day)
3) Time (Hour, minute, second)



(i) Number of saved files
Set the number of saved files. (1 to 1000)

POINT

When browsing the logging file by logging monitor or FTP, reduce the number of saved files.
If the number of saved files is large, it will take several minutes to obtain a file list by logging monitor or FTP.
(For logging monitor, the number of saved files must be reduced only when the last update time of the file is displayed in the file specifying field. (Refer to Section 4.7 (2).)

(j) When the number of saved files exceeds the above set value
As the operation to be performed when the number of saved files exceeds the set value, select either of the following.
1) Overwrite
2) Stop

(k) E-mail delivery: Send a saved file to the following e-mail address.
Set whether the saved file will be sent by e-mail or not.
1) Not checked
E-mail is not sent.

2) Checked
- When the file is saved, it is attached to e-mail and sent.
- Refer to Section 6.6.5 for the e-mail transmission by the logging function.

3) E-mail addresses 1 to 3
Select the e-mail addresses set in the "E-mail address (TO:) setting" of the E-mail setting. (Refer to Section 6.6.3 for the E-mail setting.)

(l) File transfer: Transfer a saved file to the following FTP server.
Set whether the saved file will be transferred to the FTP server or not.

1) Not checked
The file is not transferred.

2) Checked
- When the file is saved, it is transferred to the FTP server.
- Refer to Section 6.7.6 for the file transfer by the logging function.

3) Transfer target
Select the FTP server name set in the FTP setting. (Refer to Section 6.7.3 for the FTP setting.)

(3) Setting method and precautions for high-speed logging

(a) Setting method for high-speed logging
When performing high-speed logging, make the following settings in the logging setting. Only one high-speed logging can be registered.
For other than the following, the user can set as desired.

1) Tag name : Select the tag set to "Sampling: Execute at high speed"
2) Save in : Fixed to "Compact Flash™ card"
3) Timing : Fixed to "Same as the tag sampling interval"

(b) Precautions for high-speed logging

1) Be sure to create a user setting system area in the program memory of the control CPU. (Refer to Section 6.3.3 Remarks.)
2) Depending on the scan time of the control CPU and/or the time of access from the peripheral device/intelligent function module to the PLC CPU, a time lag may occur in the logging interval.

POINT
After changing the settings, make sure to click on the "Save" button. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.

REMARK

(1) When the file storage has been set to the standard ROM
When the logging file storage has been set to the standard ROM in the logging setting, pay attention to the setting of the free space of the user area in the standard ROM or the number of write times to standard ROM. (*1) (*2)

*1 For the free space of the user area, it is required to consider the capacity of the logging file, user HTML file and user data file. (User area capacity of standard ROM: 5MB)
*2 For the size of the data written to the standard ROM drive, refer to Appendix 7.1.

(2) Confirming the usage status of the standard ROM drive
The usage status of the standard ROM drive can be confirmed as the number of standard ROM erase execution times in the number of standard ROM erase area (buffer memory: 10 to 11) of the buffer memory.
When the standard ROM has been erased frequently, take preventive measures, e.g. stop logging or change storage place of the logging file to the Compact Flash™ card.

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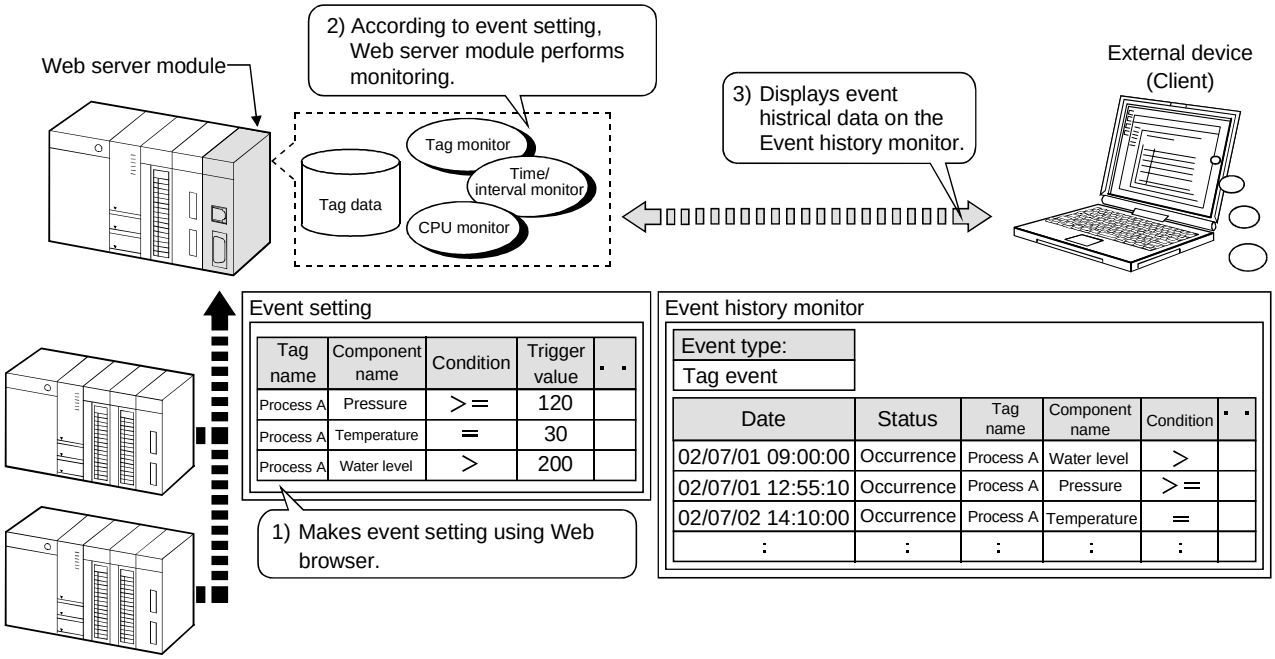
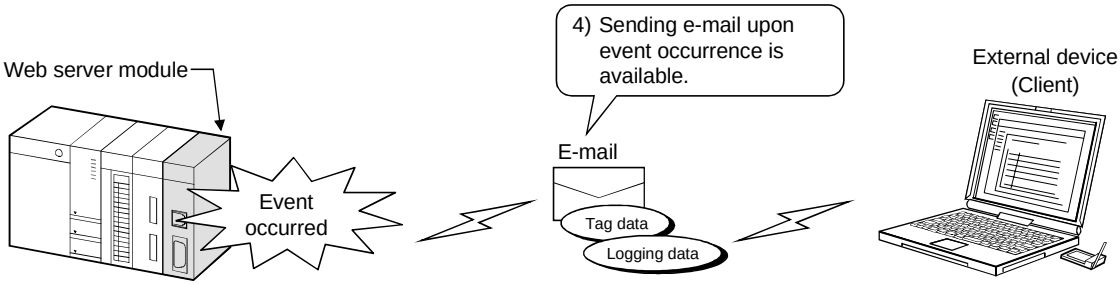
6.5 Event Monitor Function

6.5.1 Event monitor function

The event monitor function monitors the PLC CPU status (CPU monitor), tag data (tag monitor) and time (time/interval monitor), and stores the historical data of occurred events into CSV files.
The stored files can be displayed in a Web browser or downloaded by FTP operation.
Also, e-mail can be sent as required when an event occurs.





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(1) Event history file

The following conditions can be set as event history conditions, and an event history file is created for each event history condition.

(a) CPU event

1) The PLC CPU status (system error, RUN, STOP, PAUSE, etc.) set in "CPU event setting" of the event setting is monitored.

2) Storage

• File name : "CPUWATCH.CSV"

• Storage location (Standard ROM) : /ROM/WWW/EVENT/

3) File format

Refer to Section 6.2.4 (2) for details of each item.

Data	Event number	Status	CPU name	Operation status	E-mail sending	
2002/11/29 12:15:00	1	Occurrence	01:Control CPU	Warning RUN	Complete	[CR+LF]
2002/11/29 12:30:00	1	Restoration	01:Control CPU	Warning STOP	—	[CR+LF]

(b) Tag event

1) The tag data collected by the Web server module and set in "Tag event setting" of the event setting is compared with the condition value (=, <>, <=, <, >, >=).

2) Storage

• File name : "TAGWATCH.CSV"

• Storage location (Standard ROM) : /ROM/WWW/EVENT/

3) File format

Refer to Section 6.2.4 (3) for details of each item.

Data	Event number	Status	Tag name	Component name	Condition		
2002/11/29 12:15:00	1	Occurrence	01:Tag data 1	01:Component data1	>=		
2002/11/29 12:30:00	1	Restoration	01:Tag data1	01:Component data1	>=		

Trigger value	Component value	E-mail sending	
100	100	Complete	[CR+LF]
100	100	—	[CR+LF]

(c) Time/Interval event

1) The time or interval set in "Time/Interval event setting" of the event setting is monitored.

2) Storage

• File name : "TIMWATCH.CSV"

• Storage location (Standard ROM) : /ROM/WWW/EVENT/

3) File format

Refer to Section 6.2.4 (4) for details of each item.

Data	Event number	E-mail sending	
2002/11/29 12:15:00	1	Complete	[CR+LF]
2002/11/29 12:30:00	1	None	[CR+LF]

(2) When the number of event historical data exceeds the limit

In each event history file, the following operation is performed when the number of event historical data set in "Common setting" of the event setting exceeds the limit.

(a) Half of the event historical data are deleted, starting from the oldest data.

(b) The latest data are saved into the line after the remaining data.

(Example) When the number of CPU event historical data has been set to 10

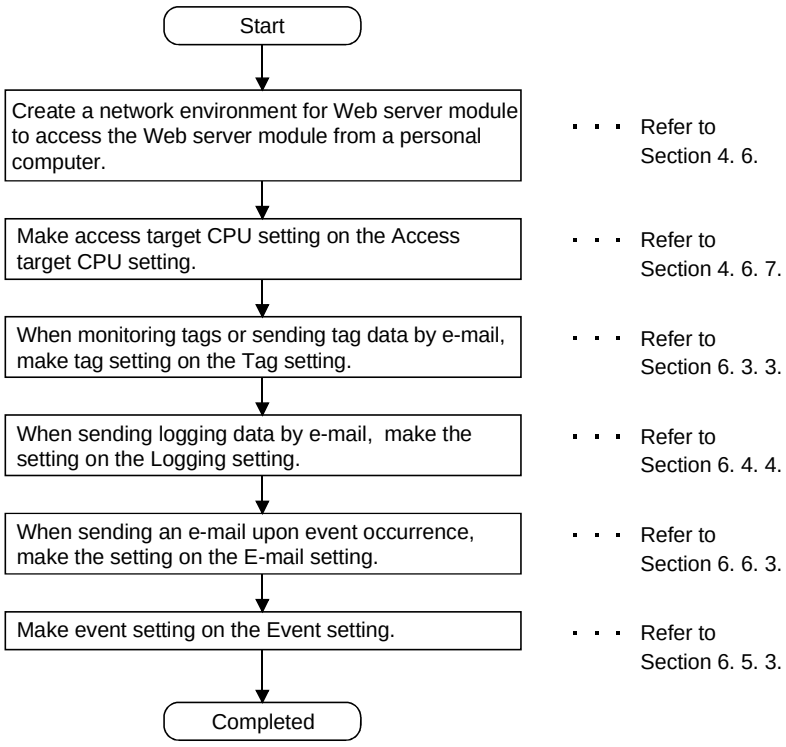
Date	Event number	Status	CPU name	Operation status	E-mail sending
11/07/2002 11:01:55	1	Occurrence	01: Control CPU	Normal STOP	None
11/07/2002 11:02:00	1	Restoration	01: Control CPU	Normal RUN	--------
11/07/2002 11:02:05	1	Occurrence	01: Control CPU	Normal STOP	None
11/07/2002 11:02:10	1	Restoration	01: Control CPU	Normal RUN	--------
11/07/2002 11:02:15	1	Occurrence	01: Control CPU	Normal STOP	None
11/07/2002 11:02:20	1	Restoration	01: Control CPU	Normal RUN	--------
11/07/2002 11:02:25	1	Occurrence	01: Control CPU	Normal STOP	None
11/07/2002 11:02:30	1	Restoration	01: Control CPU	Normal RUN	--------
11/07/2002 11:02:35	1	Occurrence	01: Control CPU	Normal STOP	None
11/07/2002 11:02:40	1	Restoration	01: Control CPU	Normal RUN	--------

Date	Event number	Status	CPU name	Operation status	E-mail sending
11/07/2002 11:02:20	1	Restoration	01: Control CPU	Normal RUN	--------
11/07/2002 11:02:25	1	Occurrence	01: Control CPU	Normal STOP	None
11/07/2002 11:02:30	1	Restoration	01: Control CPU	Normal RUN	--------
11/07/2002 11:02:35	1	Occurrence	01: Control CPU	Normal STOP	None
11/07/2002 11:02:40	1	Restoration	01: Control CPU	Normal RUN	--------
11/07/2002 11:02:45	1	Occurrence	01: Control CPU	Normal STOP	None

Five lines of event historical data from the oldest are deleted, and the latest data is stored in the sixth line.

6.5.2 Setting procedure for event monitor function

The setting procedure for using the event monitor function is indicated below.


Start
Create a network environment for Web server module to access the Web server module from a personal computer.
Refer to Section 4. 6.
Make access target CPU setting on the Access target CPU setting.
Refer to Section 4. 6. 7.
When monitoring tags or sending tag data by e-mail, make tag setting on the Tag setting.
Refer to Section 6. 3. 3.
When sending logging data by e-mail, make the setting on the Logging setting.
Refer to Section 6. 4. 4.
When sending an e-mail upon event occurrence, make the setting on the E-mail setting.
Refer to Section 6. 6. 3.
Make event setting on the Event setting.
Refer to Section 6. 5. 3.
Completed

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6.5.3 Event setting

[Setting Purpose]

1) In the common setting, set each number of event historical data.
2) In the CPU event setting, make setting to monitor the operation status of the PLC CPU.
3) In the tag event setting, make setting to compare the tag data and condition value.
4) In the time/interval event setting, make setting to monitor the time/interval.

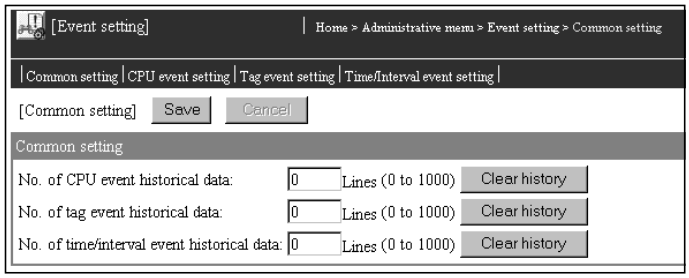
[Start Procedure]

1) Common setting (Refer to (1))
   [Administrative menu] → "Event setting" → <<Common setting>>tab → "Common setting"
2) CPU event setting (Refer to (2))
   [Administrative menu] → "Event setting" → <<CPU event setting>>tab → "CPU event setting" → Select CPU event setting No. and click on Edit → "Edit screen"
3) Tag event setting (Refer to (3))
   [Administrative menu] → "Event setting" → <<Tag event setting>>tab → "Tag event setting" → Select tag event setting No. and click on Edit → "Edit screen"
4) Time/Interval event setting (Refer to (4))
   [Administrative menu] → "Event setting" → <<Time/Interval event setting>>tab → "Time/Interval event setting" → Select time/interval event setting No. and click on Edit → "Edit screen"

(1) Common setting

Make common setting.

[Setting Screen]


[Event setting]
Home > Administrative menu > Event setting > Common setting
Common setting | CPU event setting | Tag event setting | Time/Interval event setting
[Common setting]
Save
Cancel
Common setting
No. of CPU event historical data: 0 Lines (0 to 1000) Clear history
No. of tag event historical data: 0 Lines (0 to 1000) Clear history
No. of time/interval event historical data: 0 Lines (0 to 1000) Clear history

[Setting Item]

Item	Description
No. of CPU event historical data	Sets the number of CPU event historical data.
No. of tag event historical data	Sets the number of tag event historical data.
No. of time/interval event historical data	Sets the number of time/interval event historical data.
Clear history	Clears all historical data of each file.
Save	Saves the setting. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.
Back / Cancel	Discards the changed setting and returns to the Common setting screen.

(a) No. of CPU event historical data

1) Set the number of CPU event historical data. (1 to 1000 lines)
For the processing performed when the number of CPU event historical data is exceeded, refer to Section 6.5.1 (2).
2) Clicking on the "Clear history" button clears the historical data of the CPU event history file (CPUWATCH.CSV).

(b) No. of tag event historical data

1) Set the number of tag event historical data. (1 to 1000 lines)
For the processing performed when the number of tag event historical data is exceeded, refer to Section 6.5.1 (2).
2) Clicking on the "Clear history" button clears the historical data of the tag event history file (TAGWATCH.CSV).

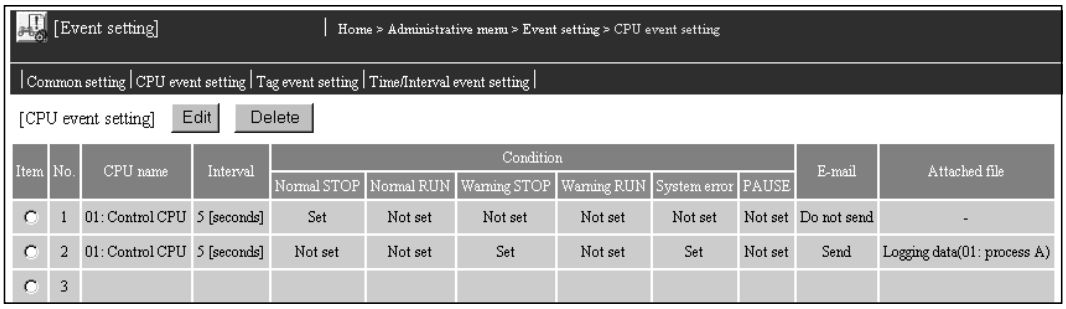
(c) No. of time/interval event historical data

1) Set the number of time/interval event historical data. (1 to 1000 lines)
For the processing performed when the number of time/interval event historical data is exceeded, refer to Section 6.5.1 (2).
2) Clicking on the "Clear history" button clears the historical of the time/interval event history file (TIMWATCH.CSV).

(2) CPU event setting

Make setting to monitor the operation status of the PLC CPU.
Up to 64 CPU event settings are available.

[CPU event setting screen]


[Event setting]
Home > Administrative menu > Event setting > CPU event setting
Common setting | CPU event setting | Tag event setting | Time/Interval event setting
[CPU event setting]
Edit
Delete
Item | No. | CPU name | Interval | Condition (Normal STOP | Normal RUN | Warning STOP | Warning RUN | System error | PAUSE) | E-mail | Attached file
1 | 01: Control CPU | 5 [seconds] | Set | Not set | Not set | Not set | Not set | Not set | Do not send | -
2 | 01: Control CPU | 5 [seconds] | Not set | Not set | Set | Not set | Set | Not set | Send | Logging data(01: process A)
3

[Setting Item]

Item	Description
Item	Selects the CPU event setting No. to be edited or deleted.
CPU name	Displays the CPU name.
Interval	Displays the CPU event interval.
Condition	Displays the CPU event conditions.
E-mail sending	Displays Whether e-mail will be sent or not upon event occurrence.
Attached file	Displays the details of the attached file to e-mail.
Edit	Edits the selected CPU event.
Delete	Deletes the selected CPU event.

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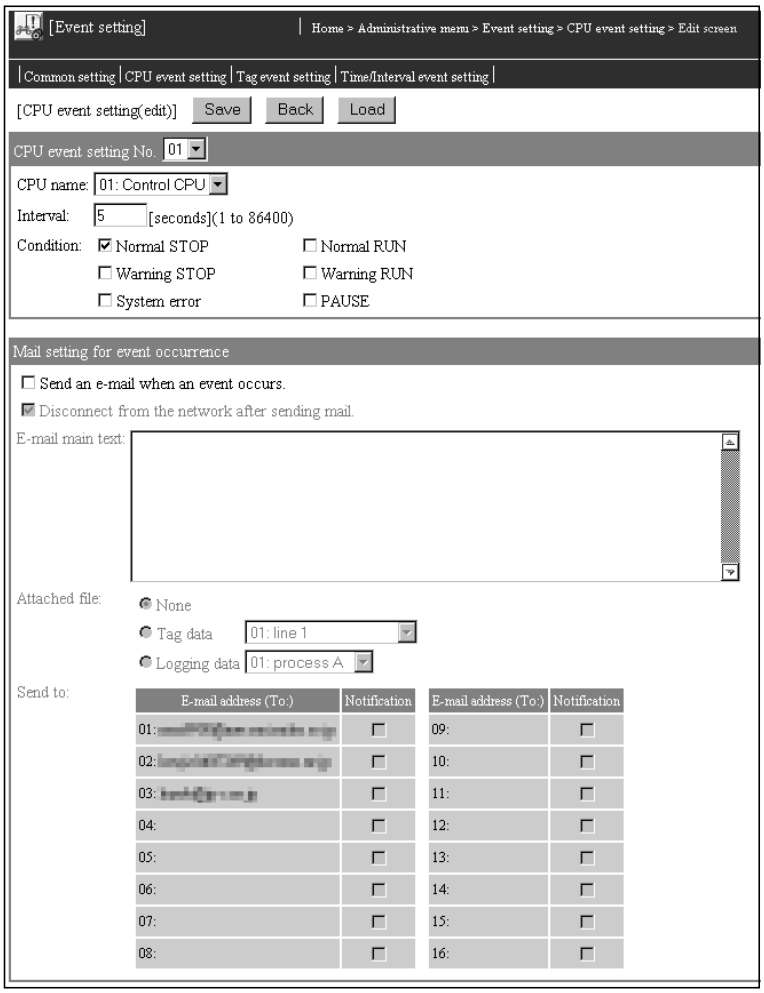
[Edit screen]



[Setting Item]

Item	Description
CPU name	Sets the CPU name.
Interval	Sets the CPU event interval.
Condition	Sets the CPU event conditions.
Mail setting for event occurrence	Makes setting when sending e-mail at event occurrence.
Save	Saves the setting. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.
Back / Cancel	Discards the changed setting and returns to the CPU event setting screen.
Select CPU event setting No. and click on Load	Loads the parameters of the No. selected in CPU event setting No. and displays them on the Edit screen.

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(a) CPU name
1) Set the CPU name to be monitored.
2) Select the CPU name set in the access target CPU setting.
(Refer to Section 4.6.7 for the access target CPU setting.)
3) The CPU name drop-down list displays the setting No. and CPU names of the access target CPU setting.
(Example) 01: Control CPU
4) By default, the host CPU of the Web server module is set as the access target CPU setting No. 1.

(b) Interval
1) Set the CPU event monitor interval. (1 to 86400 seconds)
2) A CPU event occurs once when the Web server module starts or the setting is updated, and thereafter at the specified interval.

(c) Condition
1) Set conditions for monitoring of the CPU event.
More than one conditions can be specified for one PLC CPU.
When more than one conditions have been specified, an event occurs if any of them is satisfied.

Item	Description
Normal STOP	The PLC CPU is stopped with no error.
Normal RUN	The PLC CPU is running with no error.
PAUSE	The PLC CPU is pausing.
Warning STOP(*1)	The PLC CPU is stopped with a continue error.
Warning RUN	The PLC CPU is running with a continue error.
System Error	The PLC CPU is in a stop error status or cannot communicate with the target PLC CPU (e.g. network error).

*1 In the QCPU (Q mode) function version A, QCPU (A mode), QnACPU and ACPU, a warning STOP does not occur when the PLC CPU is stopped with a continue error. (A system error occurs.)

2) When the PLC CPU returns to the status other than the specified condition, the event is restored.
When more than one condition have been specified, the event is restored when the PLC CPU returns to the status other than all the conditions.

(d) Send an e-mail when an event occurs.
1) Set whether e-mail will be sent upon event occurrence or not.
2) Refer to Section 6.6.6 for e-mail transmission by the event monitor function.

(e) Disconnect from the network after sending mail.
Disable this setting when it is not desired to disconnect the network after sending e-mail at event occurrence.
This setting is available when the Web server module is not continuously connected to the network.
Refer to Section 5.4 for the procedures for connecting to and disconnecting from the network for non-continuous connection.

(f) E-mail main text
1) Enter the main text of e-mail.
(0 to 256 characters)
2) Refer to Appendix 4 (5) for the characters applicable to the e-mail main text.

(g) Attached file
1) Select the file attached to the e-mail.
(None, Tag data, Logging Data)
2) When attaching tag data, select the tag data set in the tag setting.
(Refer to Section 6.3.3 for the tag setting.)
3) When attaching logging data, select the logging data set in the logging setting. (Refer to Section 6.4.4 for the logging setting.)

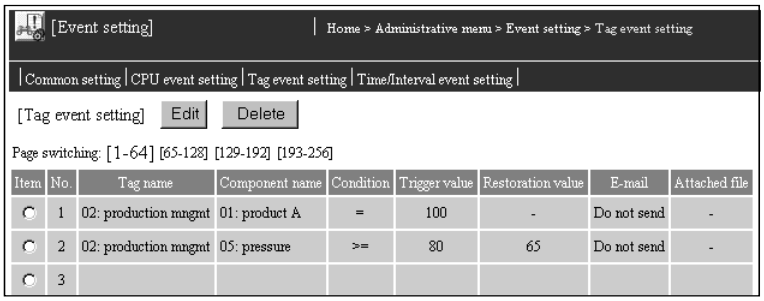
(h) Send to 1 to 16
1) Select the destination of e-mail.
2) Select the e-mail address set in the "E-mail address (TO:) setting" of the E-mail setting. (Refer to Section 6.6.3 for the E-mail setting.)
3) In the selection field for Send to, the setting No. and e-mail address of the "E-mail address (TO:) setting" are displayed.

POINT
After changing the settings, make sure to click on the "Save" button. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.

(3) Tag event setting

Make setting to monitor the tag data compared with the trigger value.
Up to 256 tag event settings are available.
Tag event monitoring is executed every time the target tag is collected by the Web server module.

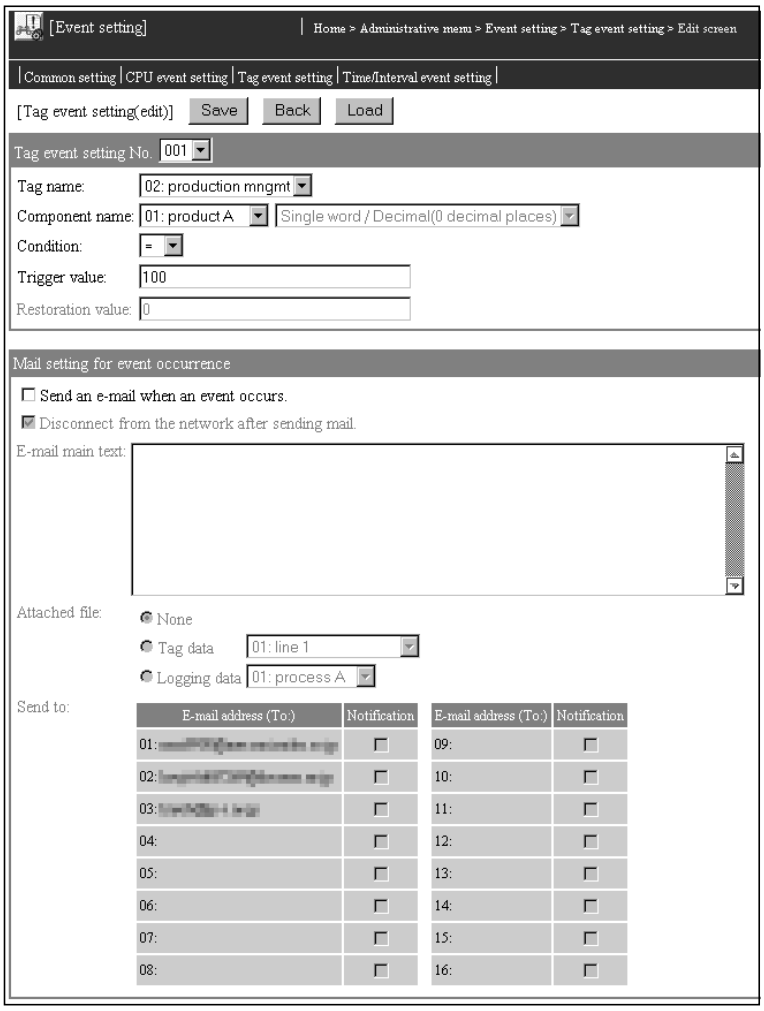
[Tag event setting screen]


[Event setting]
Home > Administrative menu > Event setting > Tag event setting
Common setting | CPU event setting | Tag event setting | Time/Interval event setting
[Tag event setting] Edit Delete
Page switching: [1-64] [65-128] [129-192] [193-256]
Item | No. | Tag name | Component name | Condition | Trigger value | Restoration value | E-mail | Attached file
1 | 02: production mngmt | 01: product A | = | 100 | - | Do not send | -
2 | 02: production mngmt | 05: pressure | >= | 80 | 65 | Do not send | -
3

[Setting Item]

Item	Description
Item	Selects the tag event setting No. to be edited or deleted.
Tag name	Displays the tag name.
Component name	Displays the component name.
Condition	Displays the tag event condition.
Trigger value	Displays the trigger value.
Restoration value	Displays the restoration value.
E-mail sending	Displays whether e-mail will be sent or not upon event occurrence.
Attached file	Displays details of the file attached to e-mail.
Edit	Edits the selected tag event.
Delete	Deletes the selected tag event.
Page switching	Switches to the list screen of the corresponding number range by selecting one of them.

[Edit screen]



[Setting Item]

Item	Description
Tag name	Sets the tag name.
Component name	Sets the component name.
Condition	Sets the tag event condition.
Trigger value	Sets the trigger value.
Restoration value	Sets the restoration value.
Mail setting for event occurrence	Makes setting when sending e-mail at event occurrence.
Save	Saves the setting. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.
Back / Cancel	Discards the changed setting and returns to the tag event setting screen.
Select tag event setting No. and click on Load	Loads the parameters of the No. selected in tag event setting No. and displays them on the Edit screen.

(a) Tag name
1) Set the tag name to be monitored.
2) Select the tag name set in the tag setting.
(Refer to Section 6.3.3 for the tag setting.)
3) The Tag name drop-down list displays the setting No. and tag names of the tag setting.

(b) Component name
1) Set the component name to be monitored. (Except the component of which data type is String) (*)
2) Select the component name set in "Component setting" of the tag setting.
(Refer to Section 6.3.3 for the tag setting.)
3) The Component name drop-down list displays the setting No. and component names of the component setting.

* When the component is displayed in the exponential form, a rounding error is produced in the range outside the number of digits set in the number of decimal places.
Note that setting components in exponential form in the tag event setting may cause incorrect event detection.

(Example) When "Exponential " and "4" are respectively set to "Display form" and "Number of decimal places" for a component.

When the device value is 123456, the component value will be 1.2346E + 05.
When the device value is 123464, the component value will be 1.2346E + 05.

Since the data in the lowest digit is rounded as indicated above, an event occurs in either case when the condition is set to "=" or the trigger value to "123460" in the tag event setting

(c) Condition
Select the condition on which the component of the PLC CPU is monitored.

Item	Description
Component = Trigger value	The component value is equal to the trigger value are the same.
Component <> Trigger value	The component value is not equal to the trigger value are different.
Component >= Trigger value	The component value is equal to or greater than the trigger value.
Component > Trigger value	The component value is greater than the trigger value.
Component < Trigger value	The component value is less than the trigger value.
Component <= Trigger value	The component value is equal to or less than the trigger value.

(d) Trigger value
Set the trigger value of the condition.

(e) Restoration value
1) Set the restoration value to make the event disappear.
2) The restoration value can be set when the condition is >=, >, < or <=.
3) In the following case, the event is restored.

Condition	Restoration
Component = Trigger value	Component <> Trigger value
Component <> Trigger value	Component = Trigger value
Component >= Trigger value	Component < Restoration value
Component > Trigger value	Component <= Restoration value
Component < Trigger value	Component >= Restoration value
Component <= Trigger value	Component > Restoration value

(f) Send an e-mail when an event occurs.
1) Set whether e-mail will be sent upon event occurrence or not.
2) Refer to Section 6.6.6 for e-mail transmission by the event monitor function.

(g) Disconnect from the network after sending mail.
Disable this setting when it is not desired to disconnect the network after sending e-mail at event occurrence.
This setting is available when the Web server module is not continuously connected to the network.
Refer to Section 5.4 for the procedures for connecting to and disconnecting from the network for non-continuous connection.

(h) E-mail main text
1) Enter the main text of e-mail.
(0 to 256 characters)
2) Refer to Appendix 4 (5) for the characters applicable to the e-mail main text.

(i) Attached file
1) Select the file attached to e-mail.
(None, Tag data, Logging Data)
2) When attaching tag data, select the tag data set in the tag setting.
(Refer to Section 6.3.3 for the tag setting.)
3) When attaching logging data, select the logging data set in the logging setting. (Refer to Section 6.4.4 for the logging setting.)

(j) Send to 1 to 16
1) Select the destination of e-mail.
2) Select the e-mail address set in the "E-mail address (TO:) setting" of the E-mail setting. (Refer to Section 6.6.3 for the E-mail setting.)
3) In the selection field for Send to, the setting No. and e-mail address of the "E-mail address (TO:) setting" are displayed.

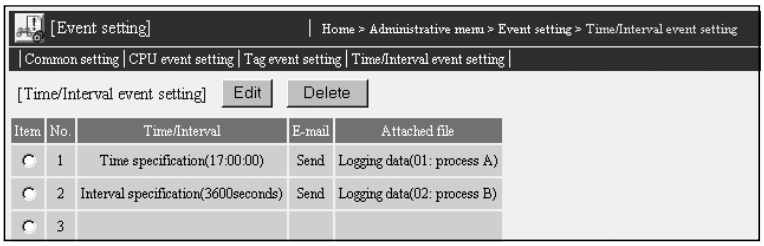
POINT

After changing the settings, make sure to click on the "Save" button.
The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.

(4) Time/Interval event setting

Make setting to monitor the time/interval.
Up to 16 time/interval event settings are available.

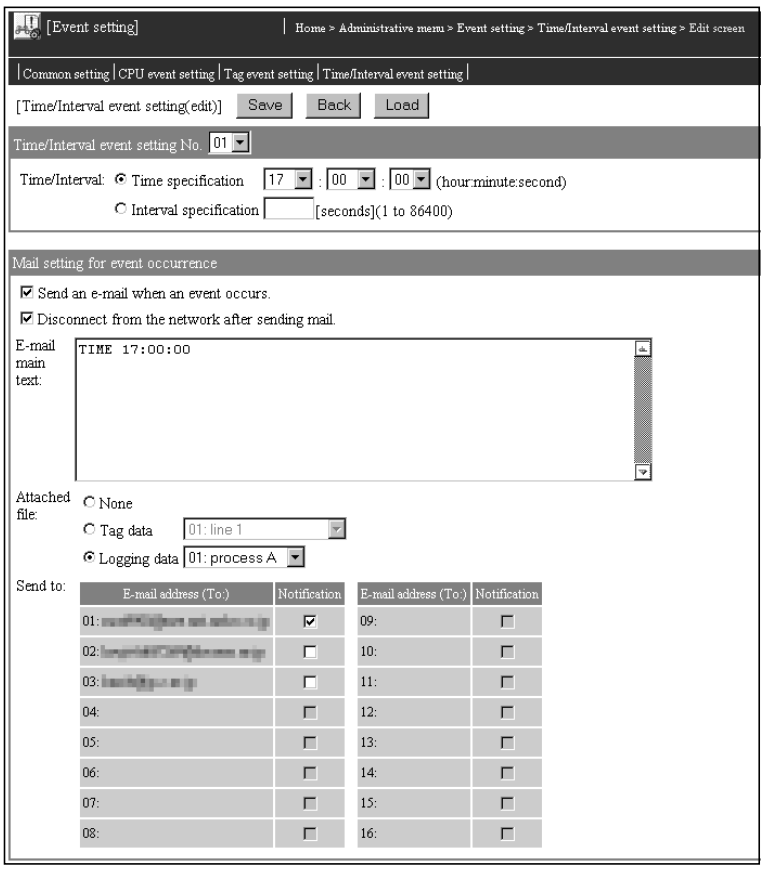
[Time/Interval event setting screen]



[Setting Item]

Item	Description
Item	Selects the time/interval event setting No. to be edited or deleted.
Time/Interval	Displays the monitoring time/interval.
E-mail sending	Displays whether e-mail will be sent or not upon event occurrence.
Attached file	Displays the details of the file attached to e-mail.
Edit	Edits the selected time/interval event.
Delete	Deletes the selected time/interval event.

[Edit screen]



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[Setting Item]

Item	Description
Time/Interval	Sets the monitoring time/interval.
Mail setting for event occurrence	Makes setting when sending e-mail at event occurrence.
Save	Saves the setting. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.
Back / Cancel	Discards the changed setting and returns to the time/interval event setting screen.
Select time/interval event setting No. and click on Load	Loads the parameters of the No. selected in time/interval event setting No. and displays them on the Edit screen.

(a) Time/interval
For the timing at which an event occurs, select either of the following.
1) Time specification
• An event occurs at the specified time.
Hour : 0 to 23, "Per"
Minute : 0 to 59, "Per" (Per minute can be specified only when Per hour is specified)
Second : 0 to 59
• An event does not occur when the Web server module is started.
2) Interval specification
An event occurs once when the Web server module is started or when the setting is updated, and thereafter at the specified interval. (1 to 86400 seconds)

(b) Send an e-mail when an event occurs.
1) Set whether e-mail will be sent upon event occurrence or not.
2) Refer to Section 6.6.6 for e-mail transmission by the event monitor function.

(c) Disconnect from the network after sending mail.
Disable this setting when it is not desired to disconnect the network after sending e-mail at event occurrence.
This setting is available when the Web server module is not continuously connected to the network.
Refer to Section 5.4 for the procedures for connecting to and disconnecting from the network for non-continuous connection.

(d) E-mail main text
1) Enter the main text of e-mail.
(0 to 256 characters)
2) Refer to Appendix 4 (5) for the characters applicable to the e-mail main text.

(e) Attached file
1) Select the file attached to e-mail.
(None, Tag data, Logging Data)
2) When attaching tag data, select the tag data set in the tag setting.
(Refer to Section 6.3.3 for the tag setting.)
3) When attaching logging data, select the logging data set in the logging setting.
(Refer to Section 6.4.4 for the logging setting.)

(f) Send to 1 to 16
1) Select the destination of e-mail.
2) Select the e-mail address set in the "E-mail address (TO:) setting" of the E-mail setting. (Refer to Section 6.6.3 for the E-mail setting.)
3) In the selection field for Send to, the setting No. and e-mail address of the "E-mail address (TO:) setting" are displayed.

POINT

After changing the settings, make sure to click on the "Save" button.
The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.

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6.6 E-mail Function

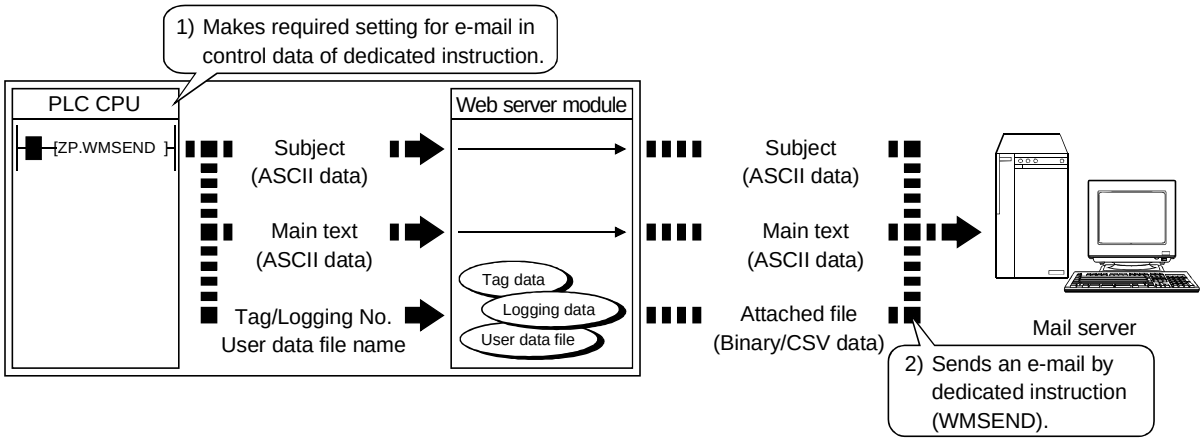
This section explains the e-mail function.

6.6.1 E-mail function

The e-mail function sends the data (tag data, logging data, user data file), which were collected by the Web server module from the PLC CPUs, to a remote external device by e-mail.
There are the following four methods for sending e-mail with this function.

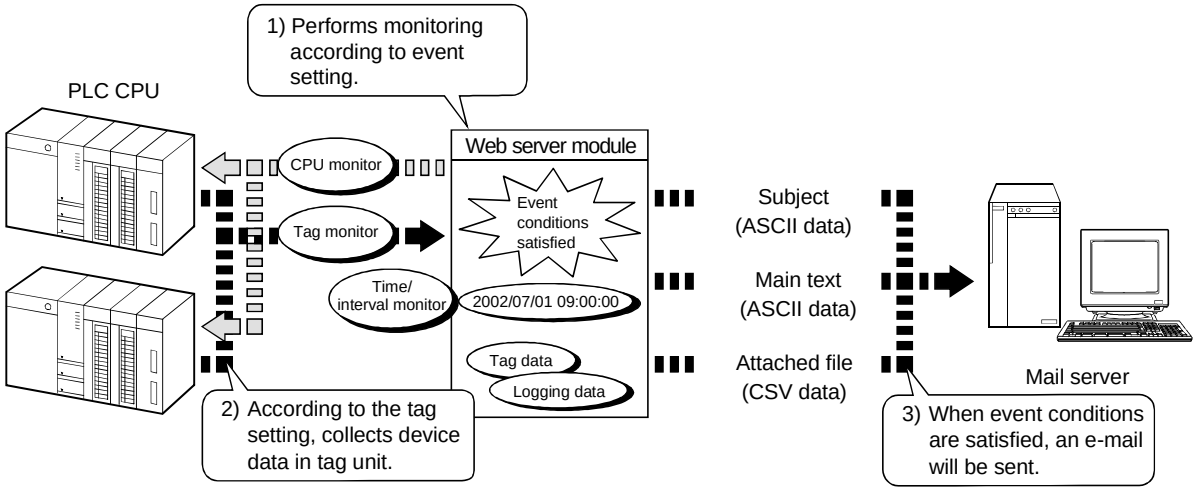
(1) E-mail transmission by PLC CPU

E-mails are sent by the dedicated instruction (WMSEND) in a sequence program.
Any subject, any main text, and an attached tag data/logging data/user data file can be sent.



(2) E-mail transmission by event monitor function

E-mails are sent by the Web server module according to the event setting of the Web browser.
An e-mail is sent when an event (CPU event, tag event, time/interval event) occurs.
A fixed subject, any main text, and an attached tag data or logging data file can be sent.

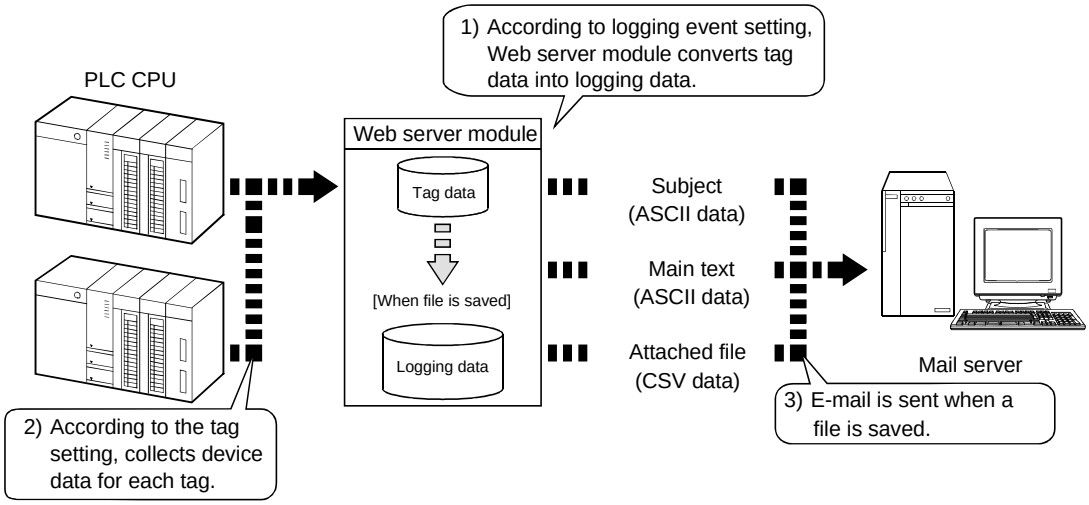

1) Performs monitoring according to event setting.
PLC CPU
Web server module
CPU monitor
Tag monitor
Time/ interval monitor
Event conditions satisfied
2002/07/01 09:00:00
Tag data
Logging data
Subject (ASCII data)
Main text (ASCII data)
Attached file (CSV data)
Mail server
2) According to the tag setting, collects device data in tag unit.
3) When event conditions are satisfied, an e-mail will be sent.

(3) E-mail transmission by logging function

E-mails are sent by the Web server module according to the logging setting of the Web browser.

An e-mail is sent when a file is saved.

A fixed subject, fixed main text and a CSV-format attached file of logging data can be sent.


1) According to logging event setting, Web server module converts tag data into logging data.
PLC CPU
Web server module
Tag data
[When file is saved]
Logging data
Subject (ASCII data)
Main text (ASCII data)
Attached file (CSV data)
Mail server
2) According to the tag setting, collects device data for each tag.
3) E-mail is sent when a file is saved.

(4) E-mail transmission by diagnostics function (Refer to Section 6.11.2)

E-mail is sent by the Web server module when the setting test of the Web browser is conducted.

An e-mail including a fixed subject and main text is sent for the e-mail sending test.

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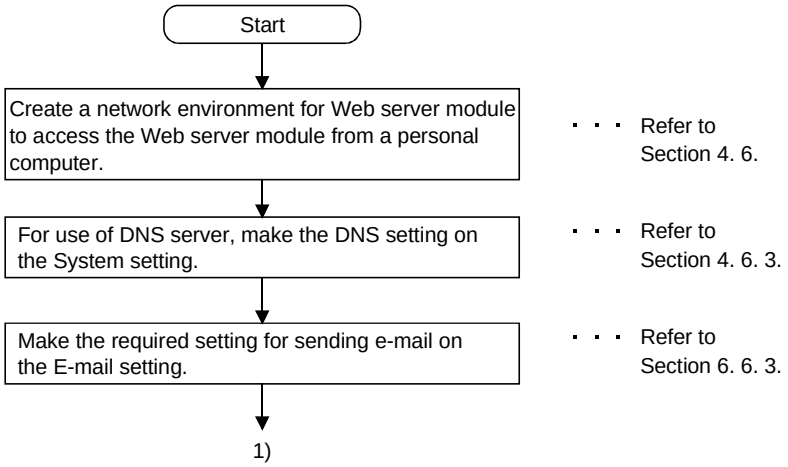
6.6.2 Setting procedure for e-mail function

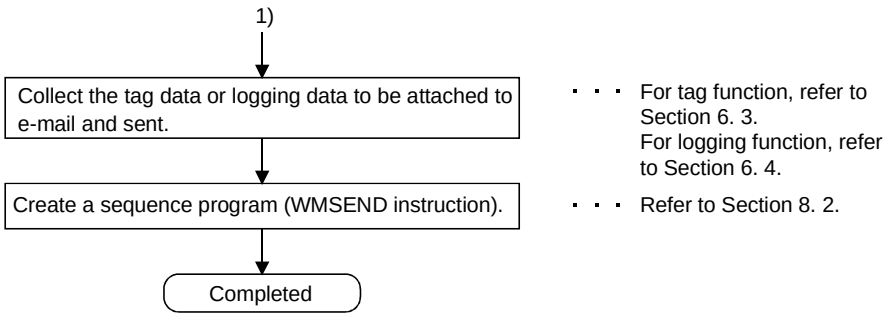
The following is the setting procedure for use of the e-mail function.

(1) Common procedure

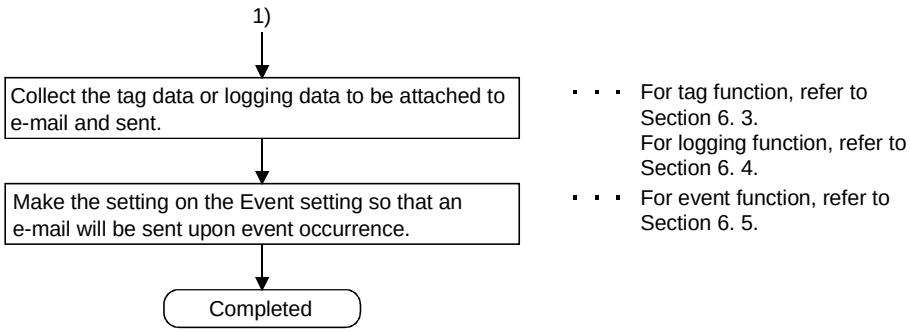
The common procedure for this function is shown below.


Start
Create a network environment for Web server module to access the Web server module from a personal computer.
Refer to Section 4. 6.
For use of DNS server, make the DNS setting on the System setting.
Refer to Section 4. 6. 3.
Make the required setting for sending e-mail on the E-mail setting.
Refer to Section 6. 6. 3.
1)

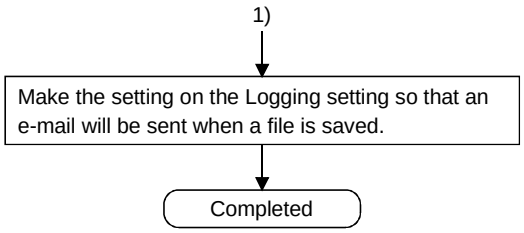
(2) Procedure for sending e-mail by PLC CPU


1)
Collect the tag data or logging data to be attached to e-mail and sent.
For tag function, refer to Section 6. 3.
For logging function, refer to Section 6. 4.
Create a sequence program (WMSEND instruction).
Refer to Section 8. 2.
Completed

(3) Procedure for sending e-mail by event monitor function

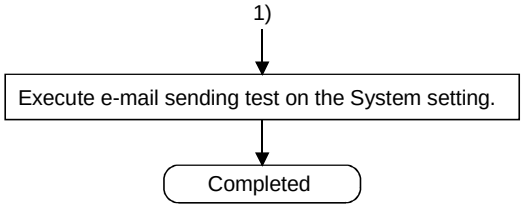

1)
Collect the tag data or logging data to be attached to e-mail and sent.
For tag function, refer to Section 6. 3.
For logging function, refer to Section 6. 4.
Make the setting on the Event setting so that an e-mail will be sent upon event occurrence.
For event function, refer to Section 6. 5.
Completed

(4) Procedure for sending e-mail by logging function



· · · For logging function, refer to Section 6. 4.

(5) Procedure for sending e-mail by diagnostics function



· · · For details of e-mail sending test, refer to Section 6. 11. 2.

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6.6.3 E-mail setting

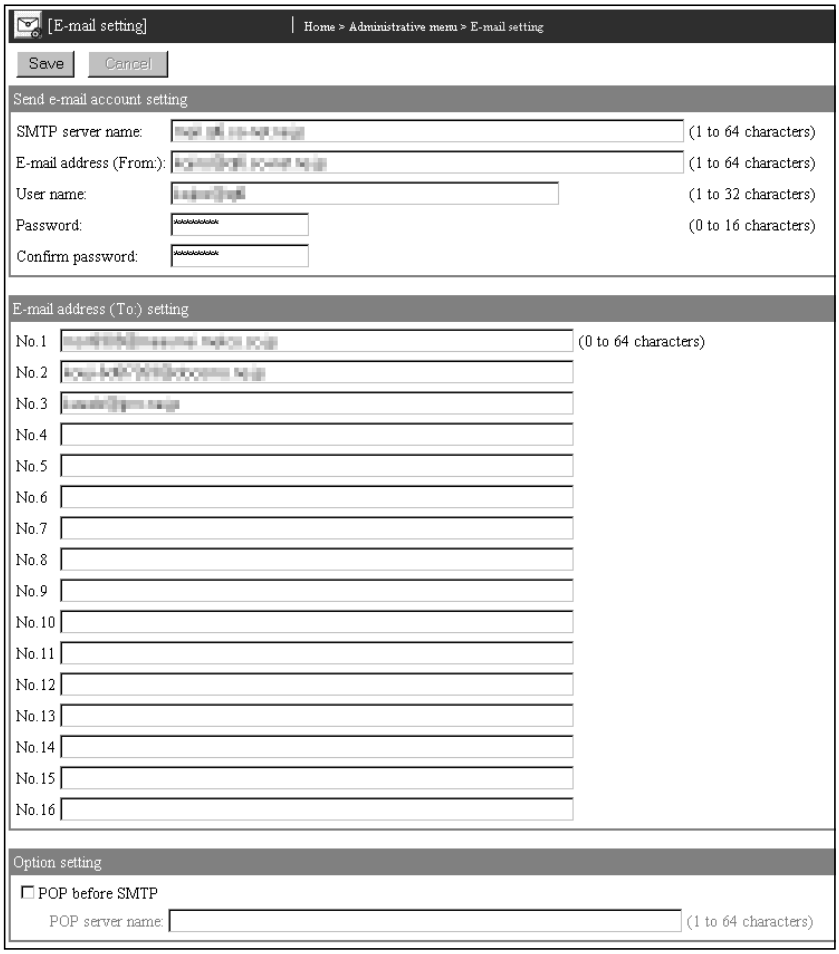
[Setting Purpose]

In the e-mail setting, setting required for e-mail transmission is set.

[Start Procedure]

[Administrative menu] → "E-mail setting"

[Setting Screen]



[Setting Item]

Item	Description
Send e-mail account setting	Sets the account of the Web server module required to send e-mail.
E-mail address (TO:) setting	Sets the destination e-mail address.
Option setting	Sets the option related to e-mail.
Save	Saves the setting. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.
Cancel	Discards the changed setting and returns to the previous setting.

(1) Send e-mail account setting

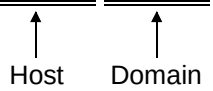
The account of the Web server module required to send e-mail is set.
Set the account specified by the Internet service provider and system administrator.
Refer to Appendix 4 (2) for the characters applicable to the send e-mail account setting.

(a) SMTP server name

1) Set the SMTP server name using the IP address or domain name.
2) When using the domain name, set as follows: (*)

- Enter all the host and domain names into the "SMTP server name" setting column.

(Example) mailserver.****.ne.jp



* When using the domain name, it is required to set the DNS server in "DNS server setting" of the System setting. (Refer to Section 4.6.3)

(b) E-mail address (From:)

Set the e-mail address of the Web server module.

(c) User name

Set the user name for the mail server.

(d) Password, Confirm password

1) Set the password for the mail server.
2) To confirm the password, set the password again to "Confirm password".

(2) E-mail address (To:) setting

Set the e-mail address of the transmission destination.
Up to 16 destination e-mail addresses can be registered.
Refer to Appendix 4 (2) for the characters applicable to the destination e-mail address.

(3) Option setting

(a) POP before SMTP

1) Enable this setting when the specification of the mail server is POP before SMTP.
2) When "POP before SMTP" is selected, set the IP address or domain name as the POP server name.
Refer to the above (1) (a) for the setting method.

POINT
After changing the settings, make sure to click on the "Save" button. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.

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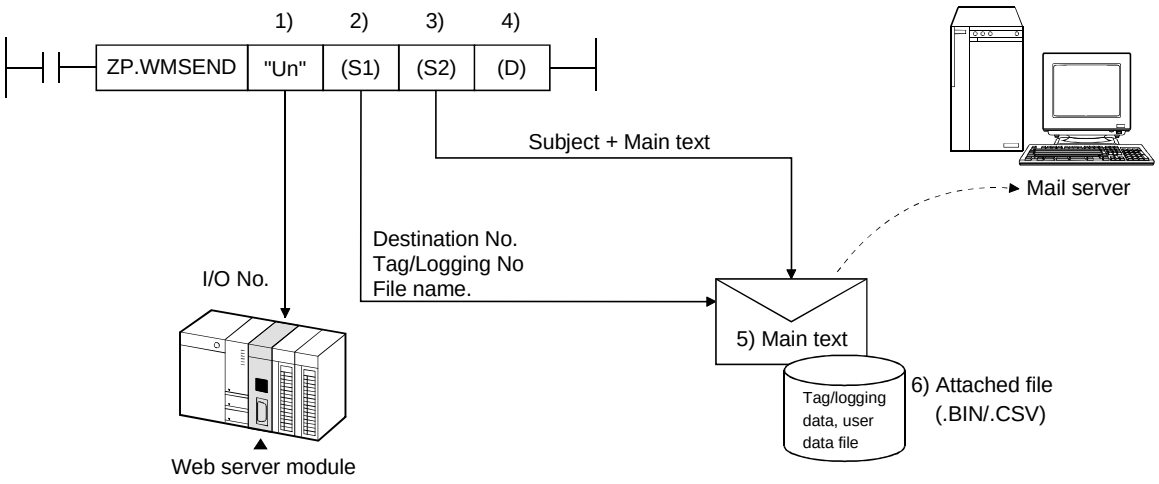
6.6.4 E-mail transmission by PLC CPU

This section explains the WMSEND instruction used to send e-mail with a sequence program.



1) Head I/O number of Web server module

2) Control data (Transmission destination No., tag/logging No, file name, etc.)
Set a destination e-mail address preset in the e-mail setting, an attached tag/logging data or user data file, etc.

3) Transmission data (Subject + main text)
Character data set in the sequence program are used.
Since character data is not converted into the ASCII text format, set them as ASCII characters in the sequence program.

4) Completed bit

5) Main text of e-mail
Character data set in the sequence program are used.
Since character data is not converted into the ASCII text format, set them as ASCII characters in the sequence program.
The following binary coded data is handled as control codes.
$0D0A_H$: Linefeed code CR + LF
00_H : End of main text

6) Attached file
Tag data/logging data/user data file

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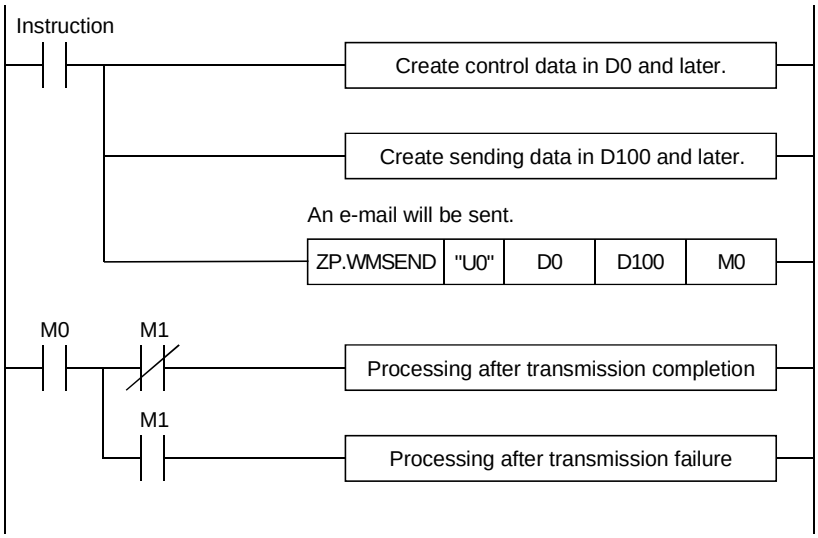
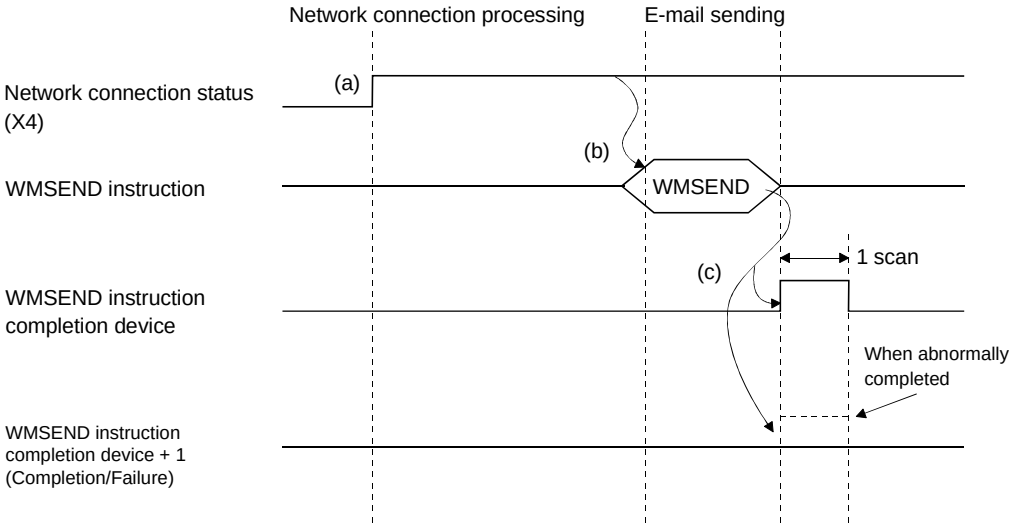
(1) E-mail transmission by sequence program

The following explains the method for sending e-mail by a sequence program.
Refer to Section 8.2 for details of the WMSEND instruction.



(2) Instruction execution timing



(a) The Web server module is connected to the network.
When the module is not connected to the network, it is automatically connected during execution of the WMSEND instruction and disconnected upon completion of the instruction.

(b) The WMSEND instruction is executed.
The e-mail specified by the WMSEND instruction is sent to the mail server.

(c) When the e-mail transmission to the mail server is completed, the WMSEND instruction completion device turns on.
When the completion device + 1 turns on (failed), an error code is stored into the control data completion status ((S1) + 1).
Refer to Section 9.3 for the error code.

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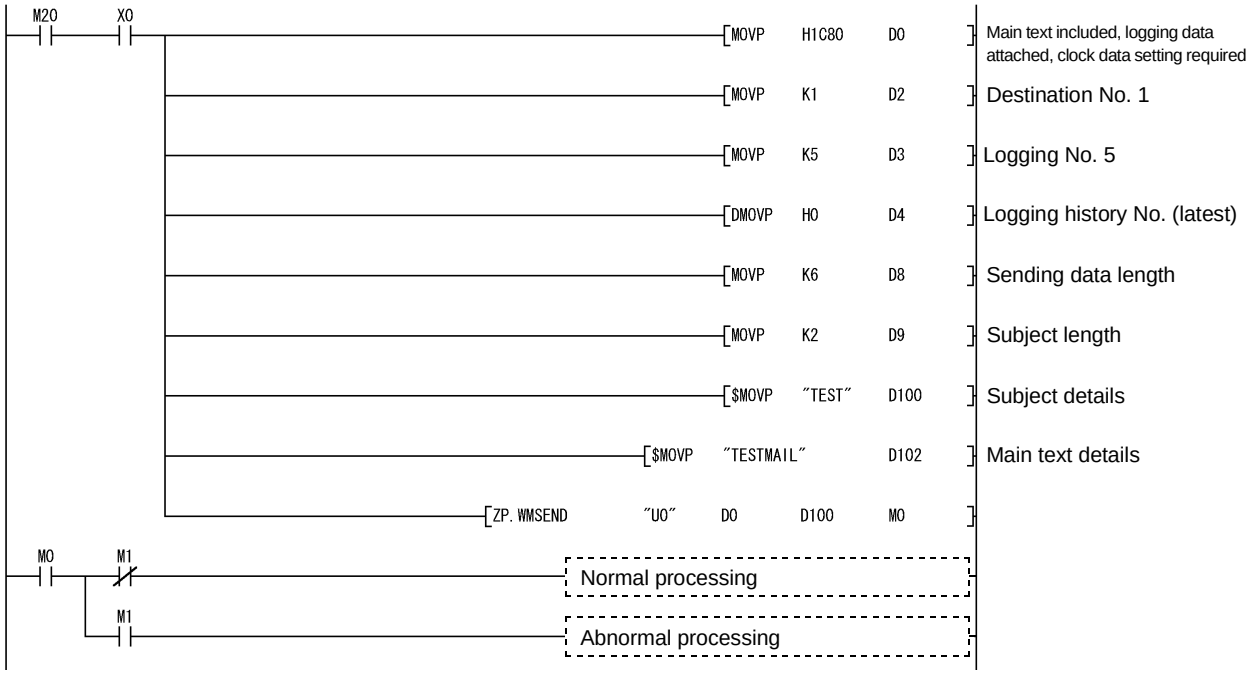
(3) Sample program

The following is a program in which the Web server module mounted in the position of I/O number X/Y00 to X/Y1F sends e-mail when M20 is turned ON.



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(4) Receiving e-mail by personal computer

(a) The e-mail sent by the Web server module is received by the personal computer.

(b) The e-mail format used by the Web server module is as follows.

Item	Description
E-mail address (From:)	E-mail address of the Web server module
Subject	Subject set in the control data of the dedicated instruction (1 to 373 words)
Main text	Main text set in the control data of the dedicated instruction (0 to 960 words)
Attached file name	Tag data : TAG□.CSV (□ indicates the tag setting No.) Logging Data : File name set in the Logging setting (.CSV) User data file : User data file name (.BIN/.CSV)
Attached file data (*1)	Tag data/logging data/user data file
Attached file capacity	Maximum 512k bytes

*1 The CSV format file of the tag data is as follows.

Component name 1, Component name 2, Component name 3, ・・・ [CR+LF]

Component value 1, Component value 2, Component value 3, ・・・ [CR+LF]

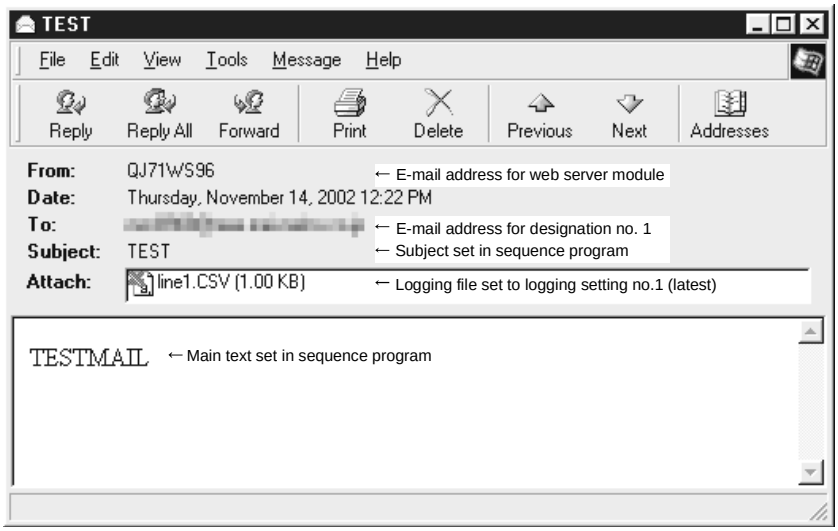
(Example)

Product A, Product B, Product C [CR+LF]

100,350,50 [CR+LF]

(c) The e-mail is received by the personal computer.

(Example) The following is an example that an e-mail sent by the sample program in (3) is received by the personal computer.
(In the case of Microsoft® Corporation's Outlook® Express 5.5)

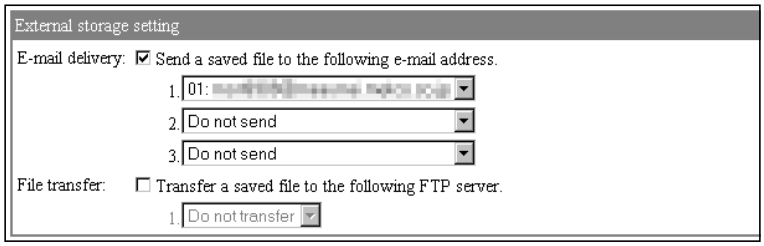

TEST
File Edit View Tools Message Help
Reply Reply All Forward Print Delete Previous Next Addresses
From: QJ71WS96 ← E-mail address for web server module
Date: Thursday, November 14, 2002 12:22 PM
To: ← E-mail address for designation no. 1
Subject: TEST ← Subject set in sequence program
Attach: line1.CSV (1.00 KB) ← Logging file set to logging setting no.1 (latest)
TESTMAIL ← Main text set in sequence program

6.6.5 E-mail transmission by logging function

When a file is saved, the Web server module sends an e-mail to the destination e-mail address.
Refer to Section 6.4 for details of the logging function.

(1) Logging setting (Refer to Section 6.4.4)

(a) In the Logging setting, set "E-mail delivery: Send a saved file to the following e-mail address." and select a destination e-mail address.



(b) When a file is saved, an e-mail is sent to the destination e-mail address.

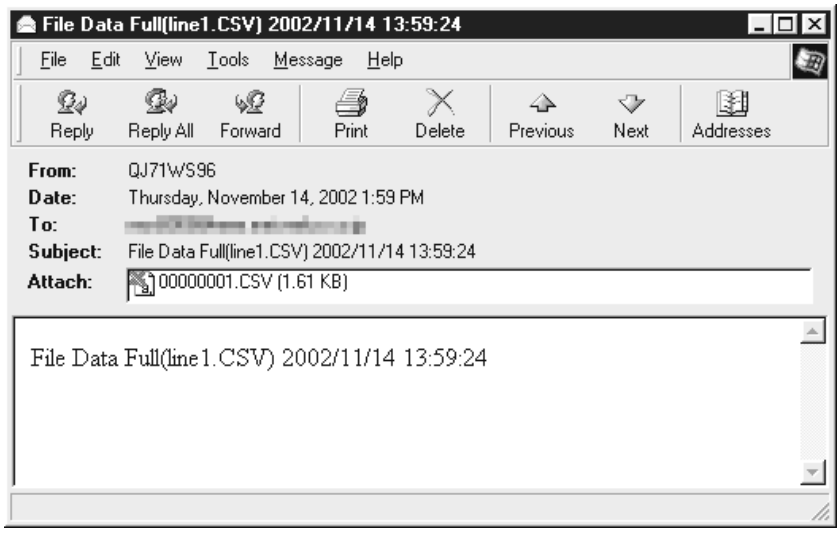
(2) Receiving e-mail by personal computer

(a) The e-mail sent by the Web server module is received by the personal computer.

(b) The e-mail format used by the Web server module is as follows.

Item	Description
E-mail address (From:)	E-mail address of the Web server module
Subject	File Data Full (File name.CSV) "Date" File name: File name set in the Logging setting
Main text	Same as in the subject
Attached file name	Saved file name (Example) 00000009.CSV
Attached file data	Saved file
Attached file capacity	Maximum 512k bytes

(c) The e-mail is received by the personal computer.
(Example) In the case of Microsoft® Corporation's Outlook® Express 5.5


File Data Full(line1.CSV) 2002/11/14 13:59:24
File Edit View Tools Message Help
Reply Reply All Forward Print Delete Previous Next Addresses
From: QJ71WS96
Date: Thursday, November 14, 2002 1:59 PM
To:
Subject: File Data Full(line1.CSV) 2002/11/14 13:59:24
Attach: 00000001.CSV (1.61 KB)
File Data Full(line1.CSV) 2002/11/14 13:59:24

(3) Precautions for sending e-mail by logging function

E-mail transmission requires several to several tens of seconds depending on the network line and data size.
When "When the number of saved files exceeds the above set value: Overwrite" has been set in the Logging setting, an error occurs if the target file is deleted as the oldest file before the e-mail transmission is completed.
Examine and change the settings of the timing, file capacity and number of saved files so that sufficient time is allowed before the file is deleted.

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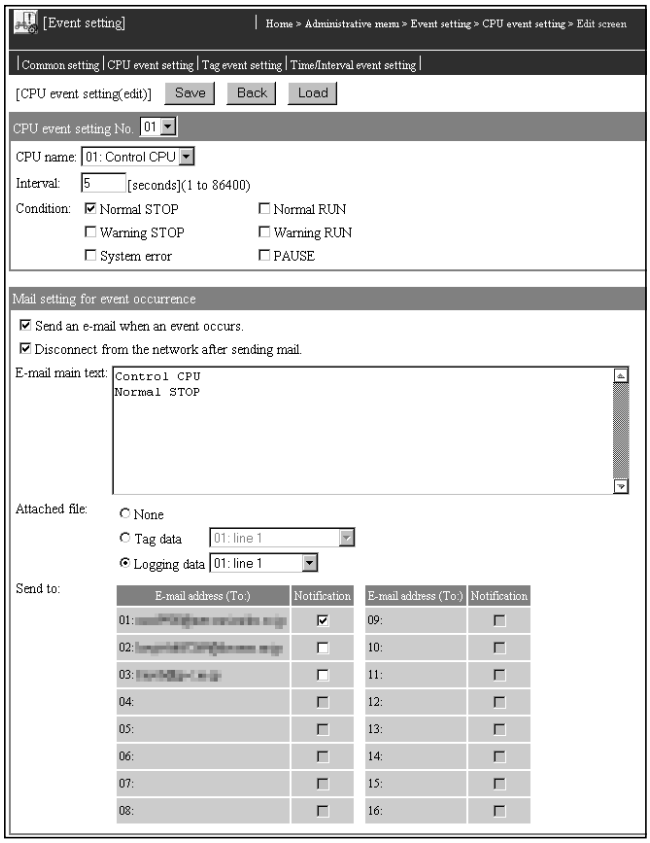
6.6.6 E-mail transmission by event monitor function

Performing CPU monitor, tag monitor and time/interval monitor, the Web server module sends an e-mail to the destination e-mail address when an event occurs. Refer to Section 6.5 for details of the event monitor function.

(1) E-mail transmission by CPU event

(a) CPU event setting (Refer to Section 6.5.3)

1) In the CPU event setting, set "Send an e-mail when an event occurs." and set the E-mail main text, Attached file and Send to.



2) When a CPU event occurs, an e-mail is sent to the destination e-mail address.

(b) Receiving e-mail by personal computer

1) The e-mail sent by the Web server module is received by the personal computer.

2) The e-mail format used by the Web server module is as follows.

Item	Description
E-mail address (From:)	E-mail address of the Web server module
Subject (*1)	"CPU name" Status "Status" "Date"
Main text	Main text set in "E-mail main text" of the CPU event setting (0 to 128 words)
Attached file name	Tag data : TAG□.CSV (□ indicates the tag setting No.) Logging Data : File name set in the Logging setting (.CSV)
Attached file data (*2)	Tag data/logging data
Attached file capacity	Maximum 512k bytes

*1 Subject is as follows.

(Example) Control CPU Status STOP 2002/07/24 16:46:23
CPU name Status Date

• CPU name
The CPU name preset in the Access target CPU setting is displayed.
• Status
The following table shows the send messages corresponding to the CPU module status.

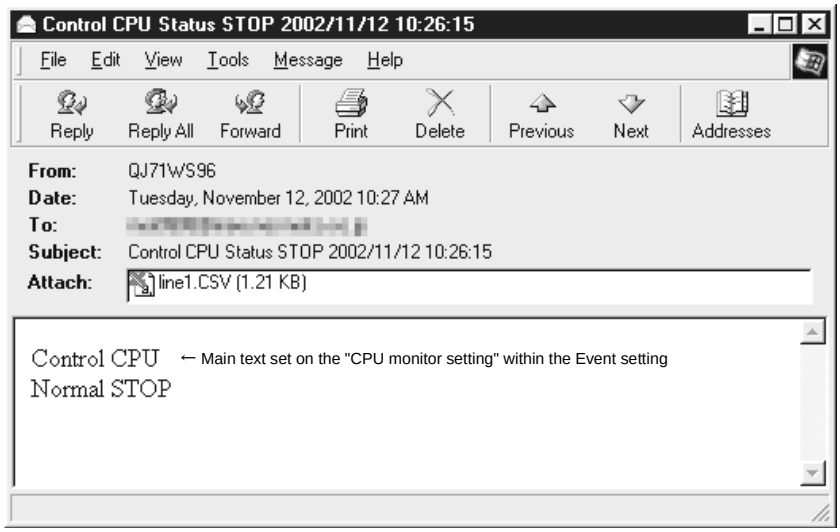
CPU Module Status		Send message
Running	Normal operation	RUN
	Warning has occurred	RUN (Warning) or RUN (Slight Abnormal)
Stopping	Normal operation	STOP
	Warning has occurred	STOP (Warning) or STOP (Slight Abnormal)
	System error has occurred	STOP (Serious/Fatal Error) or STOP (Abnormal)
Pausing	—	PAUSE

• Date
The date of the event occurrence is displayed.

*2 The CSV format file of the tag data is as follows.

Component name 1, Component name 2, Component name 3, . . . [CR+LF]
Component value 1, Component value 2, Component value 3, . . . [CR+LF]
(Example)
Product A, Product B, Product C [CR+LF]
100,350,50 [CR+LF]

(c) E-mail is received by the personal computer.
(Example) In the case of Microsoft® Corporation's Outlook® Express 5.5


Control CPU Status STOP 2002/11/12 10:26:15
File Edit View Tools Message Help
Reply Reply All Forward Print Delete Previous Next Addresses
From: QJ71WS96
Date: Tuesday, November 12, 2002 10:27 AM
To:
Subject: Control CPU Status STOP 2002/11/12 10:26:15
Attach: line1.CSV (1.21 KB)
Control CPU ← Main text set on the "CPU monitor setting" within the Event setting
Normal STOP

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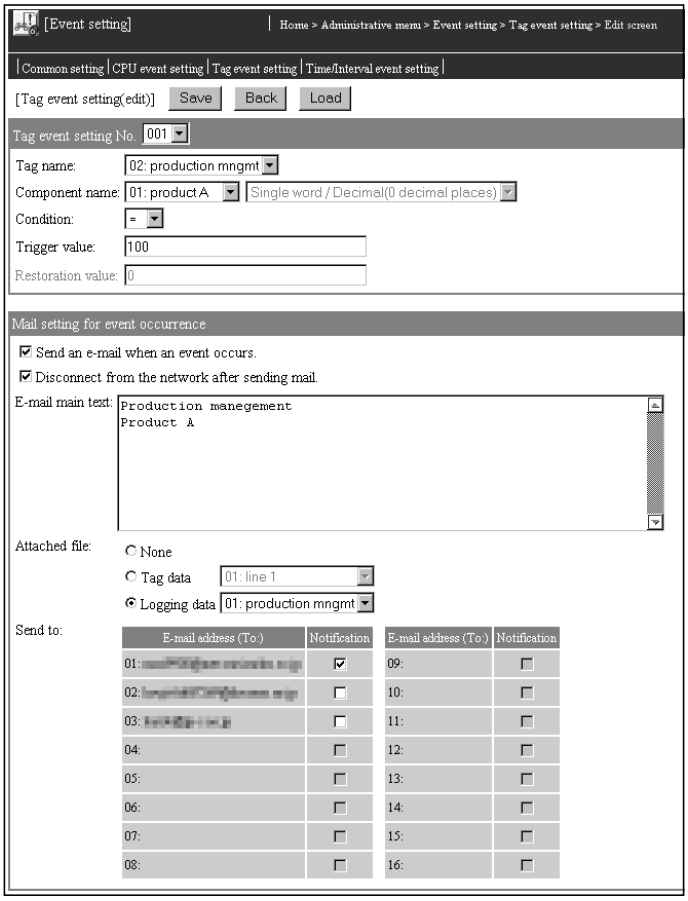
(2) E-mail transmission by tag event

(a) Tag event setting (Refer to Section 6.5.3)

1) In the Tag event setting, set "Send an e-mail when an event occurs." and set the E-mail main text, Attached file and Send to.



2) When a tag event occurs, an e-mail is sent to the destination e-mail address.

(b) Receiving e-mail by personal computer

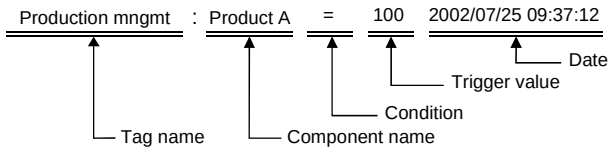
1) The e-mail sent by the Web server module is received by the personal computer.

2) The e-mail format used by the Web server module is as follows.

Item	Description
E-mail address (From:)	E-mail address of the Web server module
Subject (*1)	"Tag name" "Component name" "Condition" "Trigger value" "Date"
Main text	Main text set in "E-mail main text" of the Tag event setting (0 to 128 words)
Attached file name	Tag data : TAG□.CSV (□ indicates the tag setting No.) Logging Data : File name set in the Logging setting (.CSV)
Attached file data (*2)	Tag data/logging data
Attached file capacity	Maximum 512k bytes

*1 Subject is as follows.

(Example)



- Tag name
  The tag name set in the Tag setting is displayed.
- Component name
  The component name set in "Component setting" of the Tag setting is displayed.
- Condition/Trigger value
  The condition and trigger value of the tag event are displayed.
- Date
  The date of the event occurrence is displayed.

*2 The CSV format file of the tag data is as follows.

Component name 1, Component name 2, Component name 3, . . . [CR+LF]

Component value 1, Component value 2, Component value 3, . . . [CR+LF]

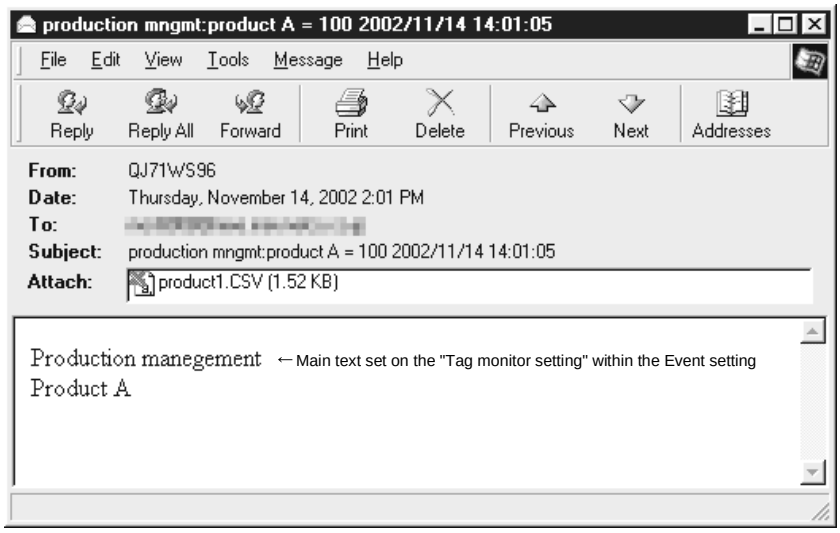
(Example)

Product A, Product B, Product C [CR+LF]

100,350,50 [CR+LF]

(c) The e-mail is received by the personal computer.

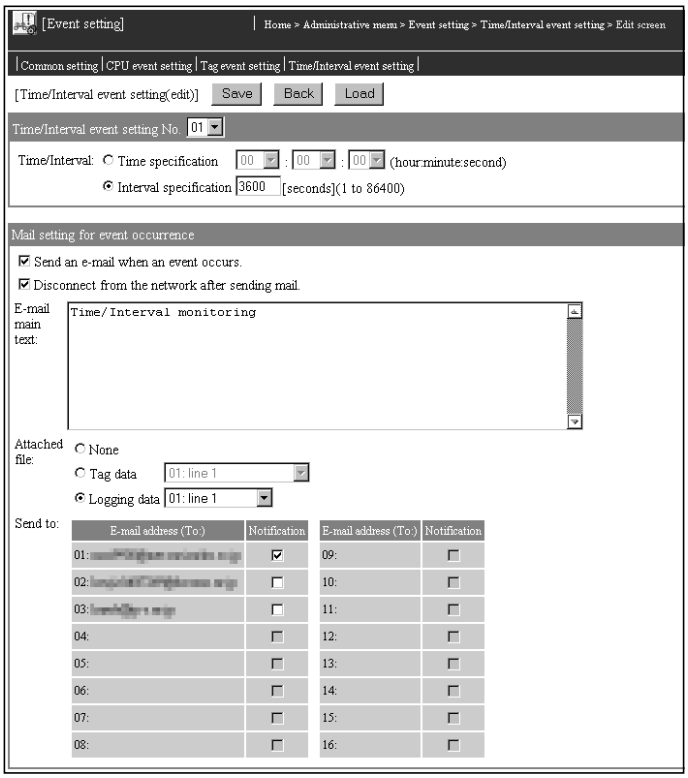
(Example) In the case of Microsoft® Corporation's Outlook® Express 5.5


production mngmt:product A = 100 2002/11/14 14:01:05
File Edit View Tools Message Help
Reply Reply All Forward Print Delete Previous Next Addresses
From: QJ71WS96
Date: Thursday, November 14, 2002 2:01 PM
To:
Subject: production mngmt:product A = 100 2002/11/14 14:01:05
Attach: product1.CSV (1.52 KB)
Production manegement ←Main text set on the "Tag monitor setting" within the Event setting
Product A

(3) E-mail transmission by time/interval event

(a) Time/Interval event setting (Refer to Section 6.5.3)

1) In the Time/interval event setting, set "Send an e-mail when an event occurs." and set the E-mail main text, Attached file and Send to.



2) When a time/interval event occurs, an e-mail is sent to the destination e-mail address.

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(b) Receiving e-mail by personal computer

1) The e-mail sent by the Web server module is received by the personal computer.

2) The e-mail format used by the Web server module is as follows.

Item	Description
E-mail address (From:)	E-mail address of the Web server module
Subject (*1)	Time Event "Date"
Main text	Main text set in "E-mail main text" of the Time/Interval event setting (0 to 128 words)
Attached file name	Tag data : TAG□.CSV (□ indicates the tag setting No.) Logging Data : File name set in the Logging setting (.CSV)
Attached file data (*2)	Tag data/logging data
Attached file capacity	Maximum 512k bytes

*1 Subject is as follows.

(Example) Time Event 2002/07/25 09:39:11

Date

• Date

The date of the event occurrence is displayed.

*2 The CSV format file of the tag data is as follows.

Component name 1, Component name 2, Component name 3, ・・・ [CR+LF]

Component value 1, Component value 2, Component value 3, ・・・ [CR+LF]

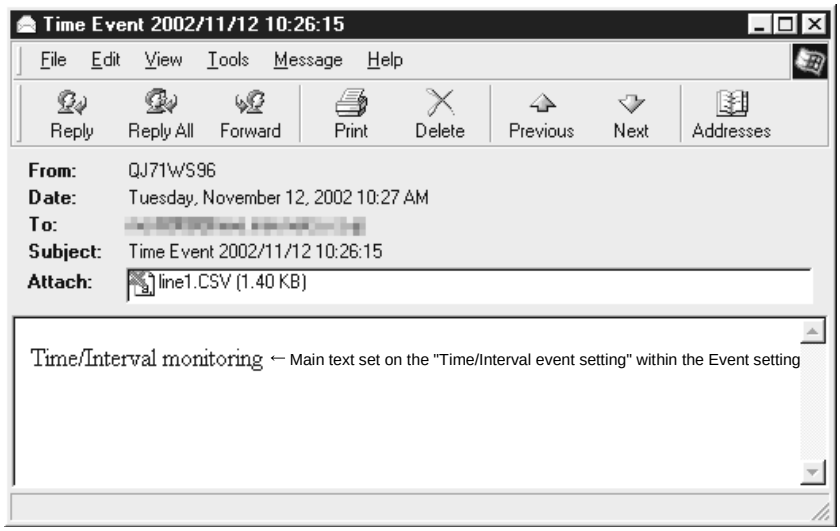
(Example)

Product A, Product B, Product C [CR+LF]

100,350,50 [CR+LF]

(c) The e-mail is received by the personal computer.

(Example) In the case of Microsoft® Corporation's Outlook® Express 5.5


Time Event 2002/11/12 10:26:15
File Edit View Tools Message Help
Reply Reply All Forward Print Delete Previous Next Addresses
From: QJ71WS96
Date: Tuesday, November 12, 2002 10:27 AM
To:
Subject: Time Event 2002/11/12 10:26:15
Attach: line1.CSV (1.40 KB)
Time/Interval monitoring ← Main text set on the "Time/Interval event setting" within the Event setting

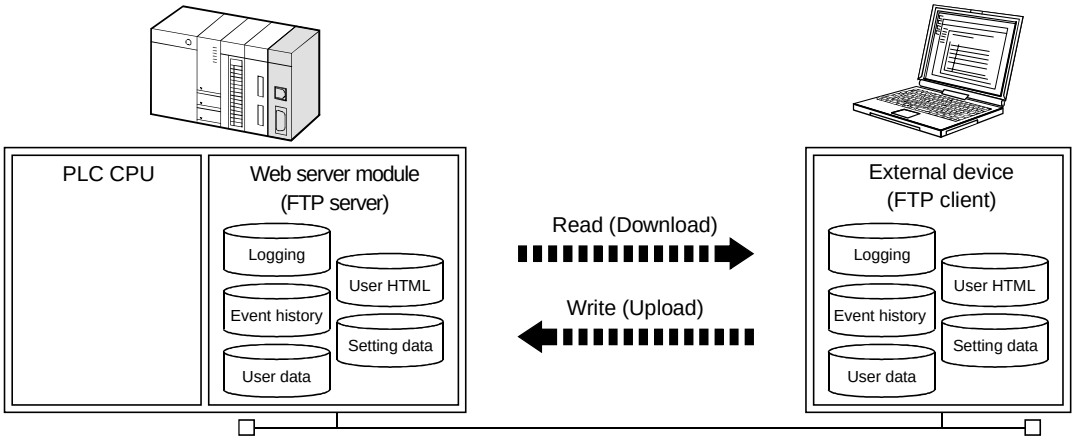
6.7 FTP Function

The FTP function is designed to transfer a file between the Web server module and external device.
The FTP function has the FTP server function and FTP client function.

6.7.1 FTP server function

(1) About FTP server function

From the external device (FTP client), the file stored in the Web server module can be read and written.

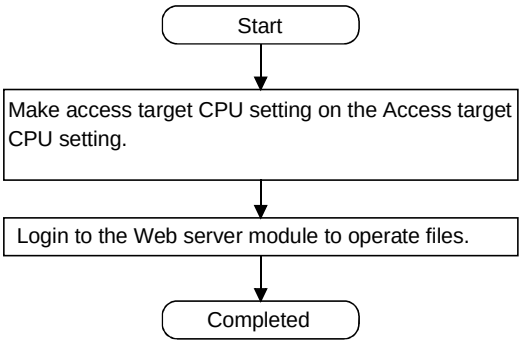


(2) Account when FTP server access is made

(a) When access is made from FTP to the Web server module, the account set in the account setting is used.
Refer to Section 4.6.5 for the account setting.

(b) The range accessible by FTP changes depending on the access authority of the account.
Refer to Appendix 3 for the directory accessible by FTP.

(3) Setting procedure for FTP function


Start
Make access target CPU setting on the Access target CPU setting.
Login to the Web server module to operate files.
Completed

- Make access target CPU setting on the Access target CPU setting. · · · Refer to Section 4. 6. FTP function is available with the setting in Section 4. 6.
- Login to the Web server module to operate files. · · · Refer to Section (4).

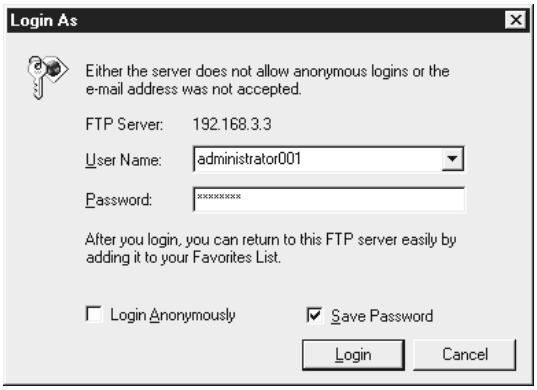
(4) Example of access to FTP server

The following provides an example that a user HTML file is written from Microsoft® Corporation's Internet Explorer 5.5 of the personal computer using the FTP server function of the Web server module.

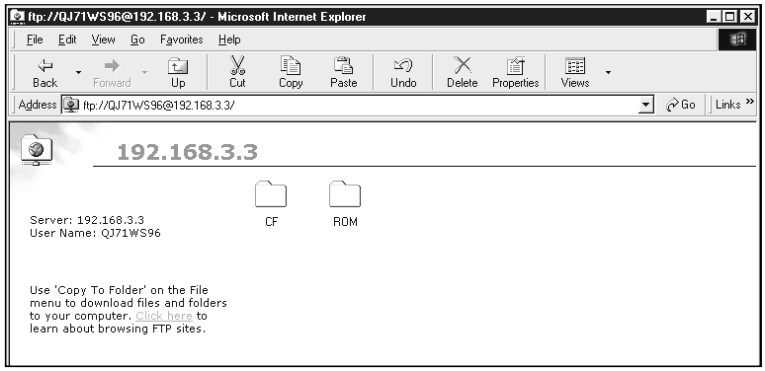
(a) Log in to the Web server module.

1) Start Microsoft® Corporation's Internet Explorer 5.5 and enter the address of the Web server module.
Refer to Section 4.6.3 for the IP address setting.

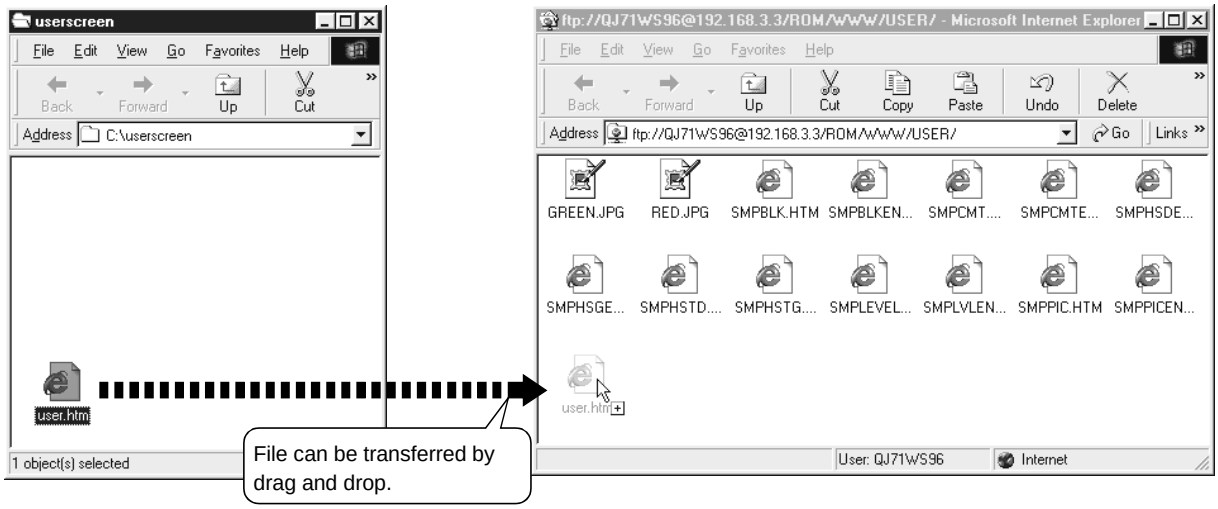
2) As the user authentication screen ("Login As" screen) is displayed when access is made to the Web server module, enter the account.
Refer to Section 4.6.5 for the account setting.


Login As
Either the server does not allow anonymous logins or the e-mail address was not accepted.
FTP Server: 192.168.3.3
User Name: administrator001
Password: ********
After you login, you can return to this FTP server easily by adding it to your Favorites List.
Login Anonymously
Save Password
Login
Cancel

3) Log in to the Web server module.


ftp://QJ71WS96@192.168.3.3/ - Microsoft Internet Explorer
File Edit View Go Favorites Help
Back Forward Up Cut Copy Paste Undo Delete Properties Views
Address ftp://QJ71WS96@192.168.3.3/
Go Links
192.168.3.3
CF
ROM
Server: 192.168.3.3
User Name: QJ71WS96
Use 'Copy To Folder' on the File menu to download files and folders to your computer. Click here to learn about browsing FTP sites.

(b) After login to the Web server module, write the user HTML file on the personal computer to the USER directory of the Web server module so that normal file operation using Explorer is available.



(5) Precautions for using the FTP server function

(a) It is required to end the FTP operation once and restart connection to FTP from the beginning if a wrong user name or password is entered to FTP, due to the restrictions on the FTP client side application.
Even when the correct user name or password is entered to "user" of the FTP command, FTP may not operate normally.

(b) The maximum number of simultaneous connections to the FTP server is 10.
However, since several internal connections may be made simultaneously depending on the FTP client, login may not be allowed if 10 connections are not reached apparently.

(c) If many files are transferred at once by FTP, a 426 (Data connection error) error may occur.
In that case, transfer the files again in numbers.

(d) When a file of the Web server module is overwritten via FTP, the file will be deleted if an error occurs during write of the file.
Write the file again via FTP.

(e) In the case of FTP access by the Internet Explorer, the user authentication screen may not be displayed depending on the Internet Explorer's specifications.
In this case, enter the Web server module address as follows:

ftp://<User name>:<Password>@<Web server module address or host name>/

(Example) In the case of factory setting:
ftp://QJ71WS96:MITSUBISHI@192.168.3.3/

6.7.2 FTP client function

(1) About FTP client function

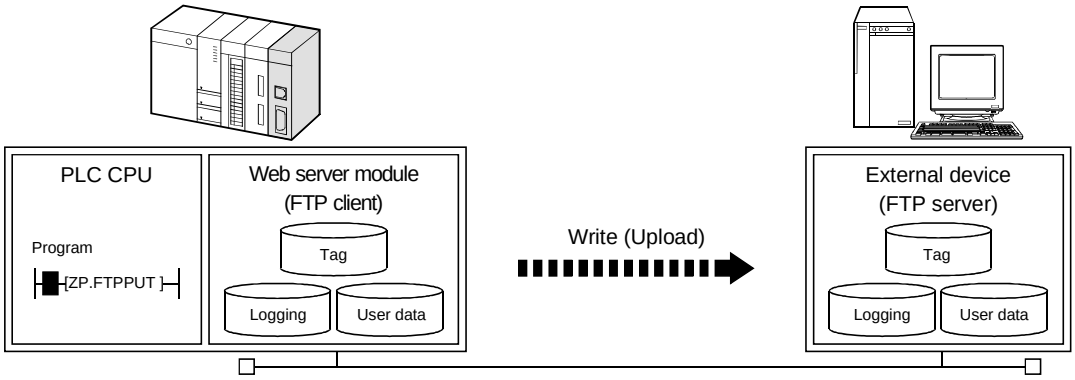
From the Web server module, the file stored in the external device (FTP server) can be read and written.

The following three methods are available for transferring a file by this function.

(a) File transfer by PLC CPU

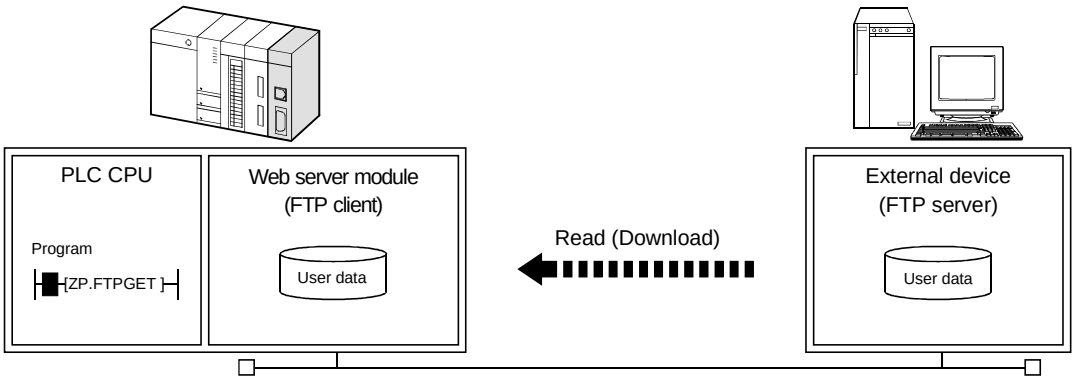
1) FTPPUT instruction

The tag data/logging data/user data file stored in the Web server module can be written to an external device (FTP server).



2) FTPGET instruction

The user data file stored in the external device (FTP server) can be read to the Web server module.



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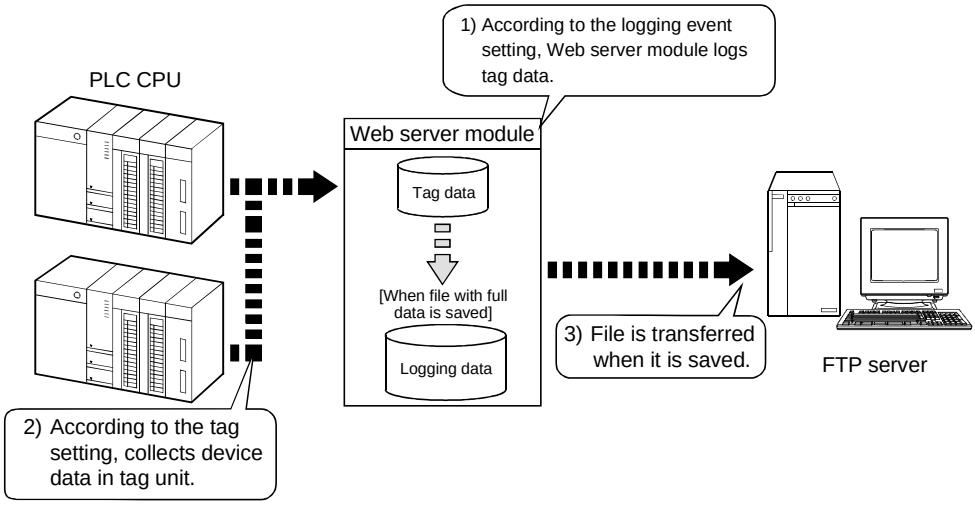
(b) File transfer by logging function

A file is transferred by the Web server module according to the logging setting of the Web browser.

When a file with full data is saved, the logging file is transferred to the FTP server.


1) According to the logging event setting, Web server module logs tag data.
PLC CPU
Web server module
Tag data
[When file with full data is saved]
Logging data
3) File is transferred when it is saved.
FTP server
2) According to the tag setting, collects device data in tag unit.

(c) File transfer by diagnostics function (refer to Section 6.11.2)

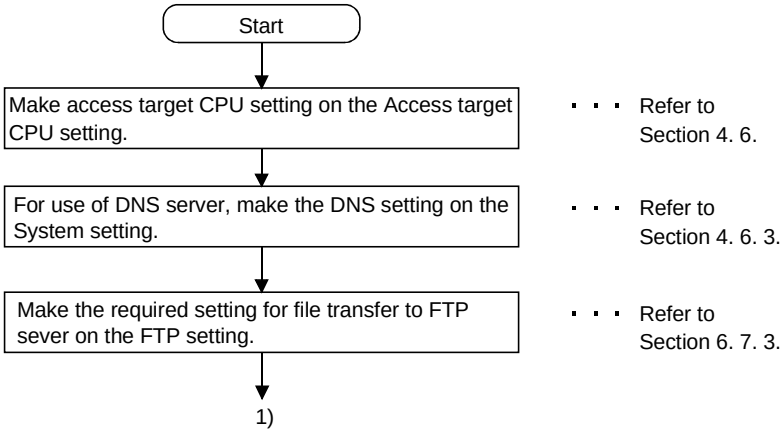
A file is transferred by the Web server module when the setting test of the Web browser is conducted.

The test file is transferred to the FTP server and a file transfer status is confirmed.

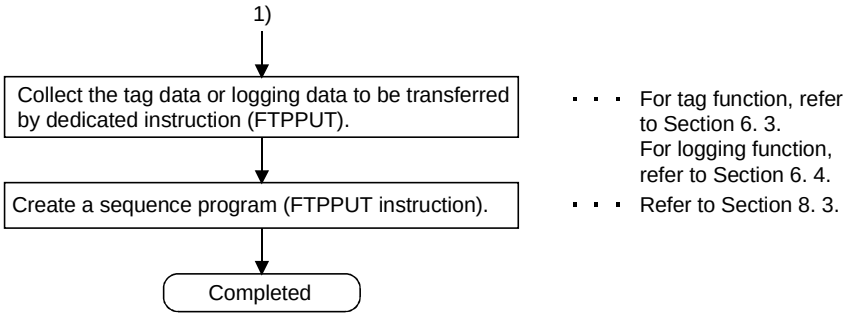
(2) Setting procedure for FTP client function

(a) Common procedure

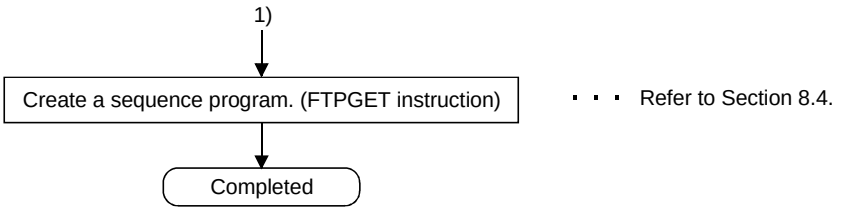
The common procedure required to use the FTP client function is indicated below.


Start
Make access target CPU setting on the Access target CPU setting.
Refer to Section 4. 6.
For use of DNS server, make the DNS setting on the System setting.
Refer to Section 4. 6. 3.
Make the required setting for file transfer to FTP sever on the FTP setting.
Refer to Section 6. 7. 3.
1)

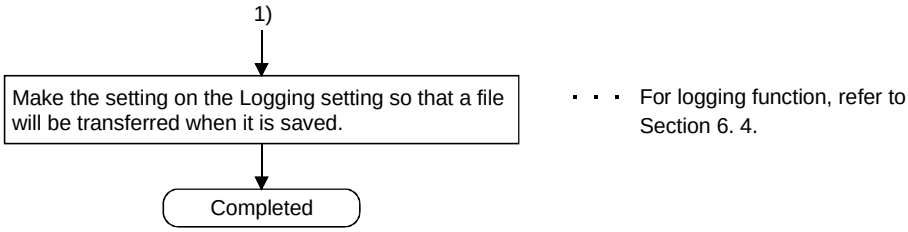
(b) Procedure for transferring (PUT) file by PLC CPU


1)
Collect the tag data or logging data to be transferred by dedicated instruction (FTPPUT).
For tag function, refer to Section 6. 3.
For logging function, refer to Section 6. 4.
Create a sequence program (FTPPUT instruction).
Refer to Section 8. 3.
Completed

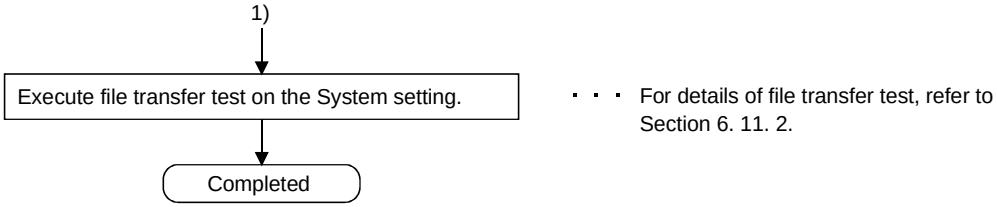
(c) Procedure for transferring (GET) file by PLC CPU



(d) Procedure for transferring file by logging function


1)
Make the setting on the Logging setting so that a file will be transferred when it is saved.
For logging function, refer to Section 6. 4.
Completed

(e) Procedure for transferring file by diagnostics function



6.7.3 FTP setting

[Setting Purpose]

In the FTP setting, make setting to use the FTP client function.
When the FTP server function is used, this setting is not required.

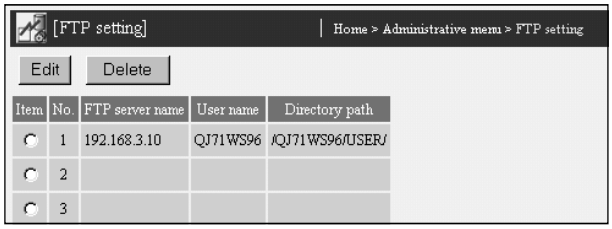
[Start Procedure]

[Administrative menu] → "FTP setting" (refer to (1)) → Select FTP setting No. and click on Edit → (refer to (2))

(1) FTP setting

Make FTP setting.

[Setting Screen]



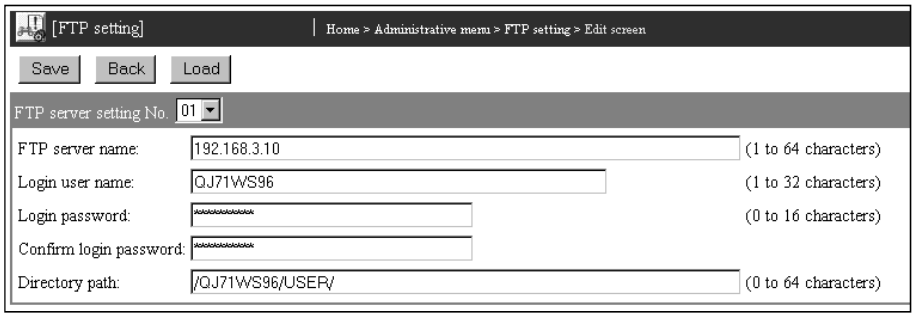
[Setting Item]

Item	Description
Item	Selects the FTP setting No. to be edited or deleted.
FTP server name	Displays the FTP server name of the file transfer destination.
User name	Displays the account (user name).
Directory path	Displays the directory path of the FTP server.
Edit	Edits the selected FTP setting.
Delete	Deletes the selected FTP setting.

(2) Edit screen

Set the FTP server name, login user name, login password and directory path.
Refer to Appendix 4 (2) for the characters applicables to the FTP setting.

[Setting Screen]


[FTP setting]
Home > Administrative menu > FTP setting > Edit screen
Save
Back
Load
FTP server setting No. 01
FTP server name: 192.168.3.10 (1 to 64 characters)
Login user name: QJ71WS96 (1 to 32 characters)
Login password: (0 to 16 characters)
Confirm login password:
Directory path: /QJ71WS96/USER/ (0 to 64 characters)

[Setting item]

Item	Description
FTP server name	Sets the FTP server name of the file transfer destination using the IP address or domain name.
Login user name	Sets the login user name for the FTP server.
Login password	Sets the login password for the FTP server.
Confirm login password	Sets the login password again to confirm the login password.
Directory path	Sets the directory path of the FTP server.
Save	Saves the setting. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.
Back/Cancel	Discards the changed setting and returns to the FTP setting screen.
Select FTP setting No. and click on Load	Loads the parameters of the No. selected in FTP setting No. and displays them on the Edit screen.

(a) FTP server name

1) Set the FTP server name using the IP address or domain name.
2) When the domain name is used for setting, make setting as described below. (*)

- Enter all the host and domain into the FTP server name setting column.

(Example) ftpserver.****.ne.jp

Host Domain

* When using the domain name, it is required to set the DNS server in "DNS server setting" of the system setting. (Refer to Section 4.6.3)

(b) Login user name

Set the login user name for the FTP server.

(c) Login password, Confirm login password

1) Set the login password for the FTP server.
2) To confirm the login password, set the login password again to "Confirm login password".

(d) Directory path

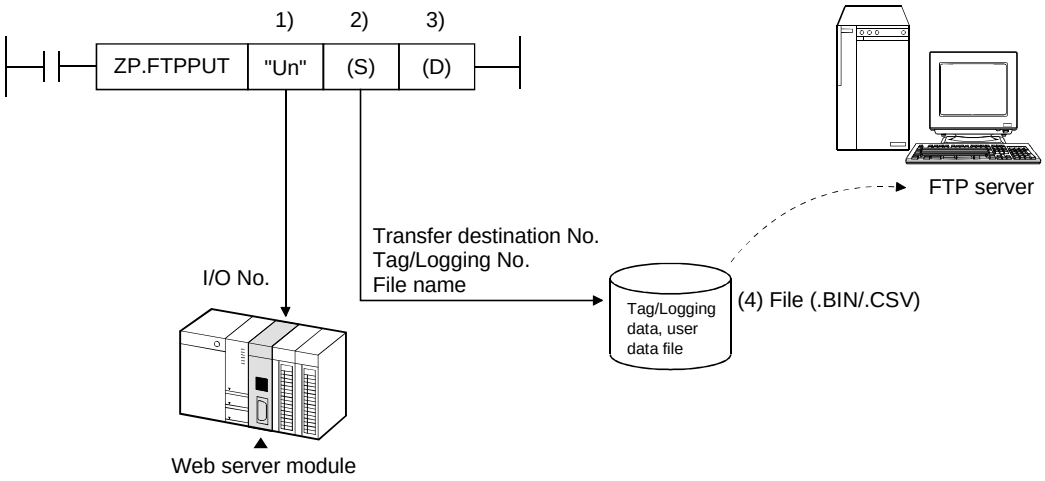
Set the FTP server directory path on the FTP server.
Use "/" as the separation character of the directory.

POINT

After changing the settings, make sure to click on the "Save" button.
The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.

6.7.4 File transfer by PLC CPU (PUT)

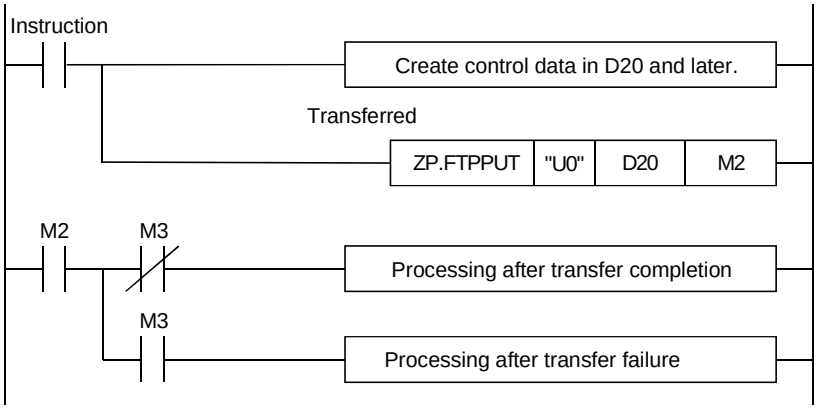
This section explains the FTPPUT instruction used to transfer a file with a sequence program.



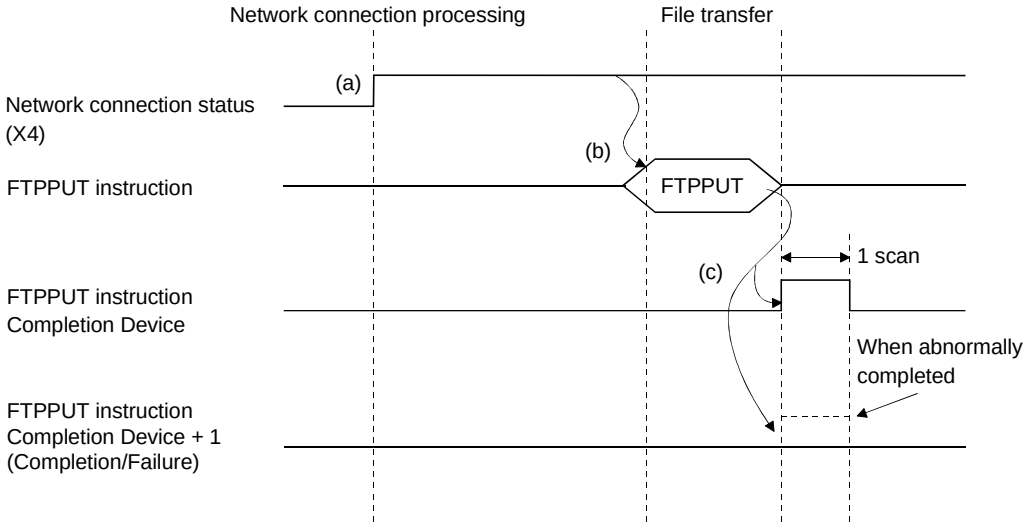
1) Head I/O number of Web server module
2) Control data (transfer destination No., tag/logging No., etc.)
   Set the transfer destination FTP server set in the FTP setting, the tag/logging data of the file to be transferred, etc.
3) Completed bit
4) File
   Tag data/logging data/user data file

(1) File transfer by sequence program

The following explains the method of transferring a file by a sequence program.
Refer to Section 8.3 for details of the FTPPUT instruction.



(2) Instruction execution timing



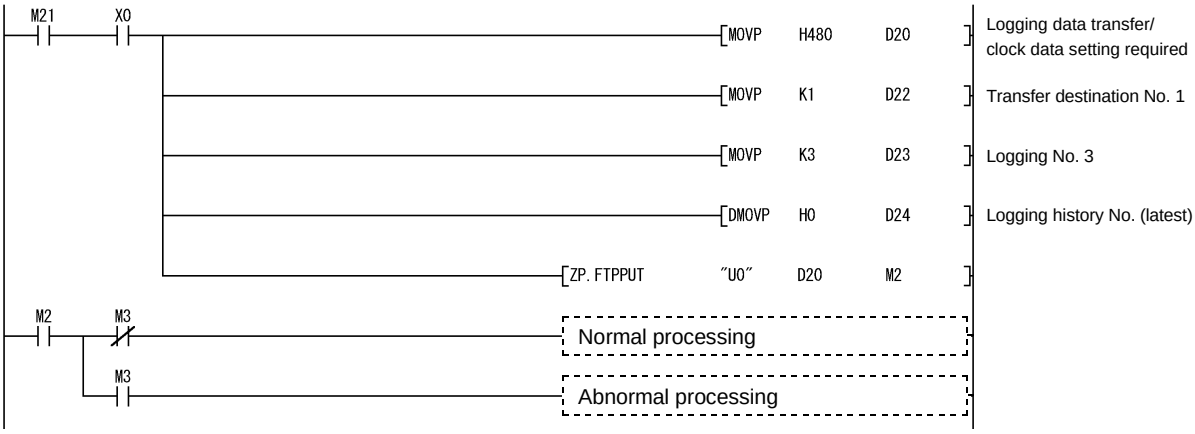
(a) The Web server module is connected to the network.
When the module is not connected to the network, it is automatically connected during execution of the FTPPUT instruction and disconnected after completion of the instruction.

(b) The FTPPUT instruction is executed.
The file specified by the FTPPUT instruction is sent to the FTP server.

(c) When file transfer to the FTP server is completed, the FTPPUT instruction completion device turns on.
When the completion device + 1 turns on (failed), the error code is stored into completion status ((S1)+1).
Refer to Section 9.3 for the error code.

(3) Sample program

The following is a program in which the Web server module mounted in the position of I/O number X/Y00 to X/Y1F transfers (PUT) logging data to the FTP server when M21 is turned ON.



(4) Format of transferred file

The following table shows the form of the file transferred by the Web server module to the FTP server.

Item	Description
File name	Tag data: TAG□. CSV (□ indicates the tag setting No.) Logging Data: File name set in the logging setting (.CSV)
File data (∗1)	Tag data/logging data/user data file
File capacity	Maximum 512k bytes

∗1 The CSV format file of the tag data is as follows.

Component name 1, Component name 2, Component name 3, ・・・ [CR+LF]

Component value 1, Component value 2, Component value 3, ・・・ [CR+LF]

(Example)

Product A, Product B, Product C [CR+LF]

100,350,50 [CR+LF]

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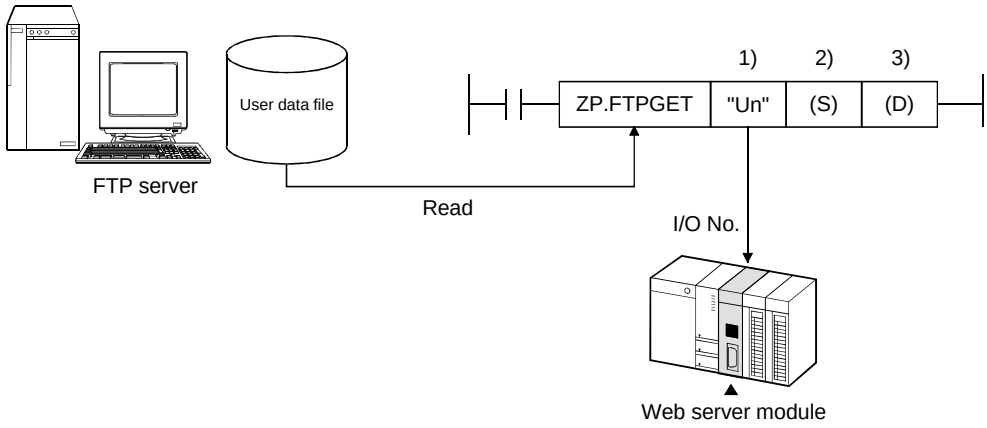
6.7.5 File transfer by PLC CPU (GET)

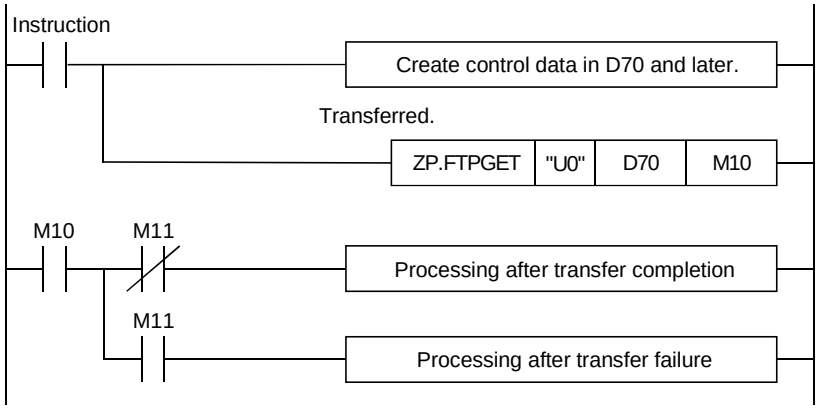
This section explains the FTPGET instruction used to transfer a file with a sequence program.



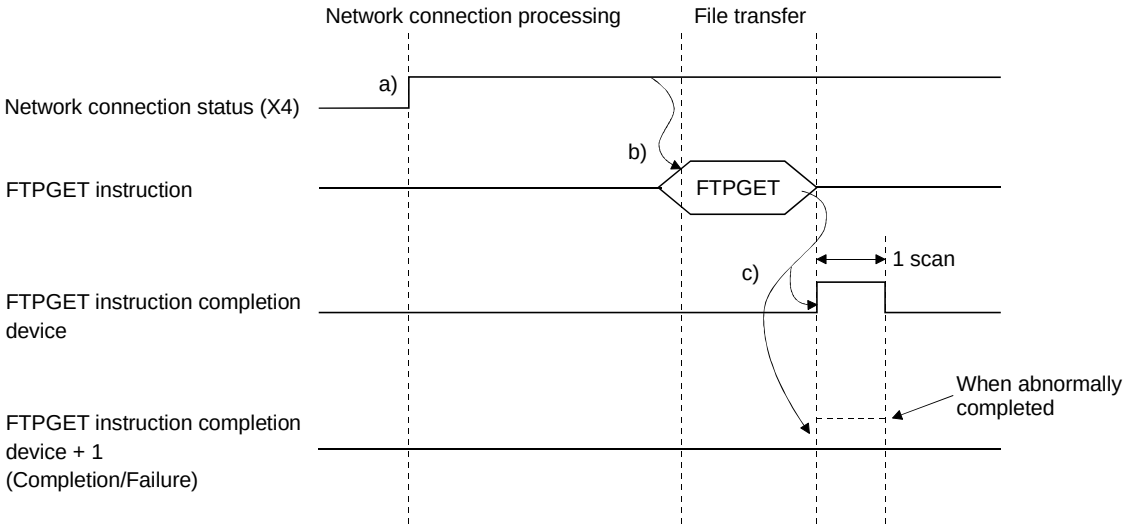
1) Head I/O number of Web server module
2) Control data (transfer source No., file name, etc.)
   Set the transfer source FTP server preset in the FTP setting, the file name to be transferred, etc.
3) Completion bit

(1) File transfer by sequence program

The following explains the method of transferring a file by a sequence program.
Refer to Section 8.4 for details of the FTPGET instruction.



(2) Instruction execution timing



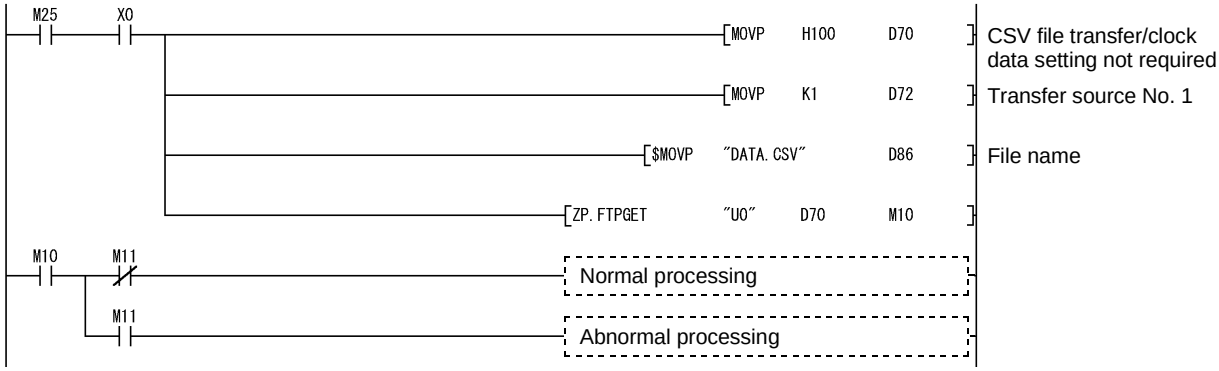
(a) The Web server module is connected to the network.
When the module is not connected to the network, it is automatically connected during execution of the FTPGET instruction and disconnected after completion of the instruction.

(b) The FTPGET instruction is executed.
The file specified by the FTPGET instruction is transferred from the FTP server.

(c) When file transfer from the FTP server is completed, the FTPGET instruction completion device turns on.
When the completion device + 1 turns on (failed), an error code is stored into the completion status ((S1)+1) area of the control data.
Refer to Section 9.3 for the error code.

(3) Sample program

The following is a program in which the Web server module mounted in the position of I/O number X/Y00 to X/Y1F transfers (GET) the user data file "DATA.CSV" from the FTP server when M25 is turned ON.

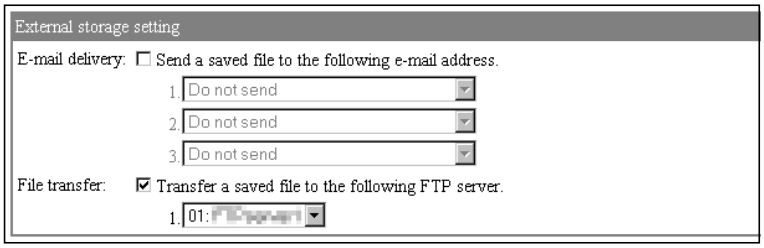


6.7.6 File transfer by logging function

When a file is saved, the Web server module transfers a logging file to the destination FTP server.
Refer to Section 6.4 for details of the logging function.

(1) Logging setting (Refer to Section 6.4.4)

(a) In the Logging setting, set "File transfer: Send a saved file to the following FTP server." and select the transfer destination FTP server name.


External storage setting
E-mail delivery:
Send a saved file to the following e-mail address.
1. Do not send
2. Do not send
3. Do not send
File transfer:
Transfer a saved file to the following FTP server.
1. 01:

(b) When a file is saved, a logging file is transferred to the destination FTP server.

(2) Format of transferred file

The following table shows the format of the file transferred by the Web server module to the FTP server.

Item	Description
File name	Saved file name (Example) 00000009.CSV
File data	Saved file
File capacity	Maximum 512k bytes

(3) Precautions for transferring a file by logging function

File transfer requires several to several tens of seconds depending on the network line and data size.
When "When the number of saved files exceeds the above set value: Overwrite" has been set in the Logging setting, an error occurs if the target file is deleted as the oldest file before the file transfer is completed.
Examine and change the settings of the timing, file capacity and number of saved files so that sufficient time is allowed before the file is deleted.

6.8 Access Log Function

[Setting Purpose]

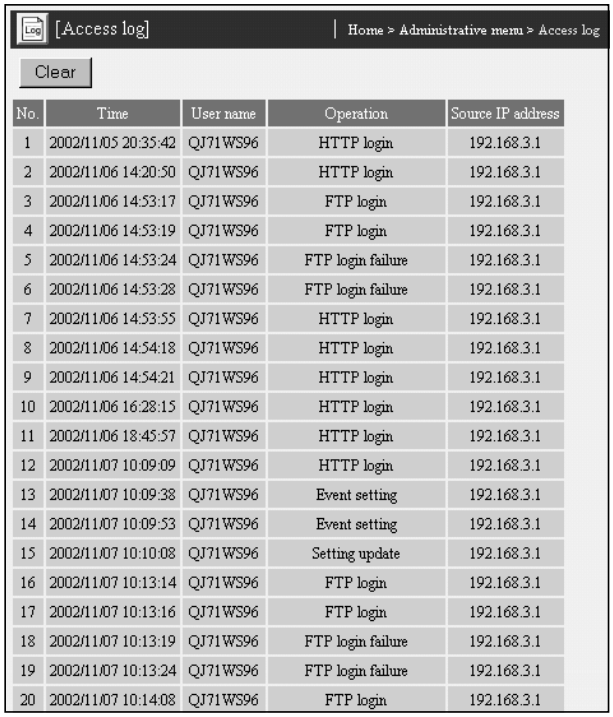
Access log is a function to record access from the external device to the Web server module.

It allows users to check the access frequency from the external device and check for the illegal access.

[Start Procedure]

[Administrative menu] → "Access log"

[Setting Screen]



No.	Time	User name	Operation	Source IP address
1	2002/11/05 20:35:42	QJ71WS96	HTTP login	192.168.3.1
2	2002/11/06 14:20:50	QJ71WS96	HTTP login	192.168.3.1
3	2002/11/06 14:53:17	QJ71WS96	FTP login	192.168.3.1
4	2002/11/06 14:53:19	QJ71WS96	FTP login	192.168.3.1
5	2002/11/06 14:53:24	QJ71WS96	FTP login failure	192.168.3.1
6	2002/11/06 14:53:28	QJ71WS96	FTP login failure	192.168.3.1
7	2002/11/06 14:53:55	QJ71WS96	HTTP login	192.168.3.1
8	2002/11/06 14:54:18	QJ71WS96	HTTP login	192.168.3.1
9	2002/11/06 14:54:21	QJ71WS96	HTTP login	192.168.3.1
10	2002/11/06 16:28:15	QJ71WS96	HTTP login	192.168.3.1
11	2002/11/06 18:45:57	QJ71WS96	HTTP login	192.168.3.1
12	2002/11/07 10:09:09	QJ71WS96	HTTP login	192.168.3.1
13	2002/11/07 10:09:38	QJ71WS96	Event setting	192.168.3.1
14	2002/11/07 10:09:53	QJ71WS96	Event setting	192.168.3.1
15	2002/11/07 10:10:08	QJ71WS96	Setting update	192.168.3.1
16	2002/11/07 10:13:14	QJ71WS96	FTP login	192.168.3.1
17	2002/11/07 10:13:16	QJ71WS96	FTP login	192.168.3.1
18	2002/11/07 10:13:19	QJ71WS96	FTP login failure	192.168.3.1
19	2002/11/07 10:13:24	QJ71WS96	FTP login failure	192.168.3.1
20	2002/11/07 10:14:08	QJ71WS96	FTP login	192.168.3.1

[Setting Item]

Item	Description
Time	Displays the time when access was made.
User name	Displays the user name who made access.
Operation	Displays the operation performed for access.
Source IP address	Displays the IP address of the access source.
Clear	Clears the access log. Up to 500 records can be saved by the access log.

(1) Time

The time when access was made is displayed.

(Example) 2002/07/18 19:42:01

(2) User name

(a) The user name who made access is displayed.

(b) Set the user name in the account setting.
(Refer to Section 4.6.5 for the account setting.)

(3) Operation

The following table explains the operations performed for access.

Item	Description
HTTP login	Login to the Web server was executed.
HTTP login failure	Login to the Web server failed.
Data write	Write to device data or write to tag data was performed.
System setting	System setting was made.
Dial-up setting	Dial-up setting was made.
Access target CPU setting	Access target CPU setting was made.
Tag setting	Tag setting was made.
Logging setting	Logging setting was made.
FTP setting	FTP setting was made.
E-mail setting	E-mail setting was made.
Event setting	Event setting was made.
Address notification setting	Address notification setting was made.
Account setting	Account setting was made.
IP filter setting	IP filter setting was made.
CF backup	Data was backed up by the Compact Flash™ card.
CF restore	Data was restored from the Compact Flash™ card.
CF format	Compact Flash™ card was formatted.
CSV export	Setting data was exported to a CSV file.
CSV import	Setting data was imported from a CSV file.
Setting update	Setting were updated.
FTP login	Login to the FTP server was executed.
FTP login failure	Login to the FTP server failed.

(4) Source IP address

The IP address of the access source is displayed in decimal.
(Example) 192. 168. 3. 1

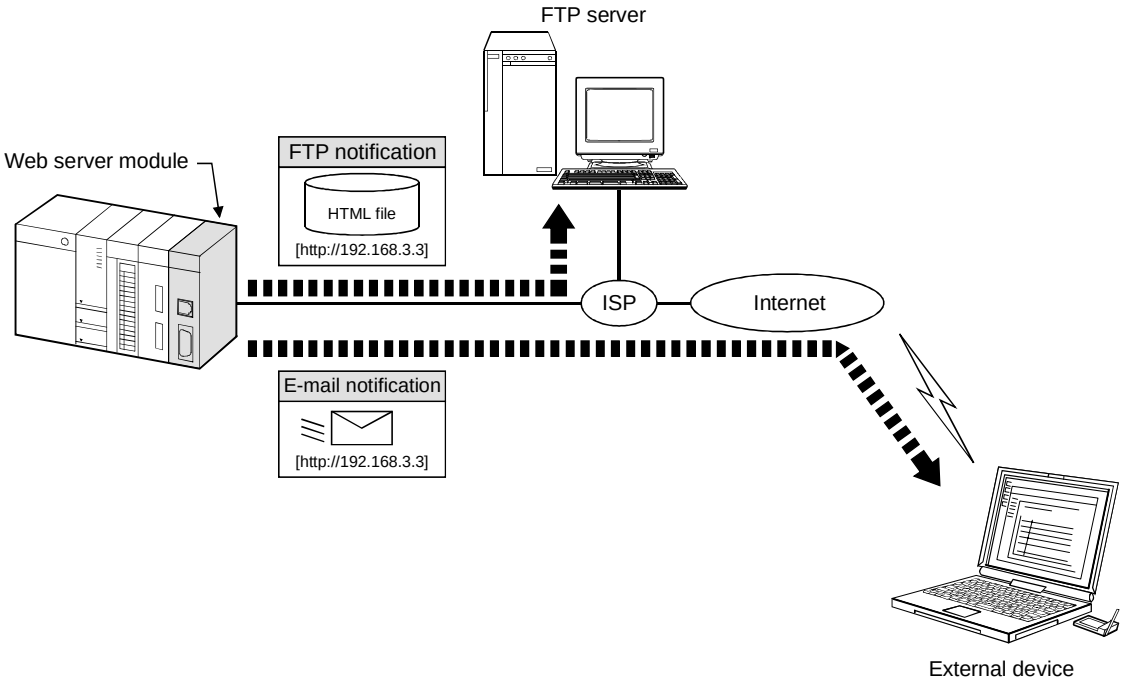
(5) Precautions for using the access log function.

Though several login records may be registered for one login, it is not an error because several logins have been executed internally.

6.9 Address Notification Function

6.9.1 Address notification function

The address notification function notifies the external device of the URL of the Web server module by E-mail or FTP.
When network connection is made, the global IP address is assigned from the Internet service provider to the Web server module.
When the external device is notified of the IP address that the Web server module has obtained through address notification, access to the Web server module is enabled.



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6.9.2 Address notification setting

[Setting Purpose]

1) In the IP address setting, set the IP address and HTTP port number of which the external device will be notified by E-mail or FTP.
2) In the e-mail notification setting, set the destination e-mail address and address notification timing when IP address notification is made by e-mail.
3) In the FTP notification setting, set the transfer destination FTP server when IP address notification is made by file transfer.

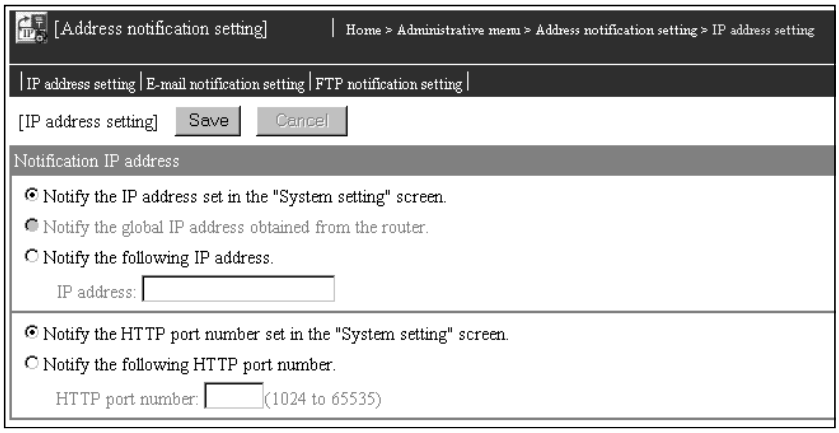
[Start Procedure]

1) IP address setting (refer to (1))
   [Administrative menu] → "Address notification setting" → <<IP address setting>> tab → "IP address setting"
2) E-mail notification setting (refer to (2))
   [Administrative menu] → "Address notification setting" → <<E-mail notification setting>> tab → "E-mail notification setting"
3) FTP notification setting (refer to (3))
   [Administrative menu] → "Address notification setting" → <<FTP notification setting>> tab → "FTP notification setting"

(1) IP address setting

Make IP address setting.

[Setting Screen]


[Address notification setting]
Home > Administrative menu > Address notification setting > IP address setting
IP address setting | E-mail notification setting | FTP notification setting
[IP address setting]
Save
Cancel
Notification IP address
Notify the IP address set in the "System setting" screen.
Notify the global IP address obtained from the router.
Notify the following IP address.
IP address:
Notify the HTTP port number set in the "System setting" screen.
Notify the following HTTP port number.
HTTP port number:
(1024 to 65535)

[Setting Item]

Item	Description
Notification IP address	Set the IP address and HTTP port of which the external device will be notified.
Save	Saves the setting. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.
Cancel	Discards the changed setting and returns to the previous setting.

(a) Set the notification IP address.

1) Select the IP address of which the external device will be notified.

Item	Description
Notify the IP address set in the "System setting" screen.	Select this item when notifying the external device of the IP address set in the system setting. (Refer to Section 4.6.3)
Notify the global IP address obtained from the router. (*1)	Select this item when connecting through a router. The WAN side (Internet side) IP address is obtained from the router and notified.
Notify the following IP address.	Select this item when notifying the specified IP address.

*1 When the router is incompatible with UPnP, the Web server module cannot obtain the global IP address from the router.
Obtain the static global IP address from the Internet service provider, and specify the obtained IP address at "Use the following IP address."

2) When "Notify the following IP address." has been selected, set the IP address in decimal number.
(Example) 192. 168. 3. 3

3) Set the IP address after consulting the network administrator (person in change of network planning, IP address management, etc.).

(b) Specify the notification HTTP port number.

1) Select the HTTP port number of which the external device will be notified.
It is recommended to use the default value (80) of the HTTP port number.

Item	Description
Notify the HTTP port number set in the "System setting" screen.	Select this item when using the HTTP port number set in the system setting.
Notify the following HTTP port number.	Select this item when using the specified HTTP port number (1024 to 65535).

2) When "Notify the following HTTP port number." has been selected, set the HTTP port number in decimal number.
1024 to 65535: HTTP port number

3) Set the HTTP port number after consulting the network administrator (person in change of network planning, IP address management, etc.).

POINT

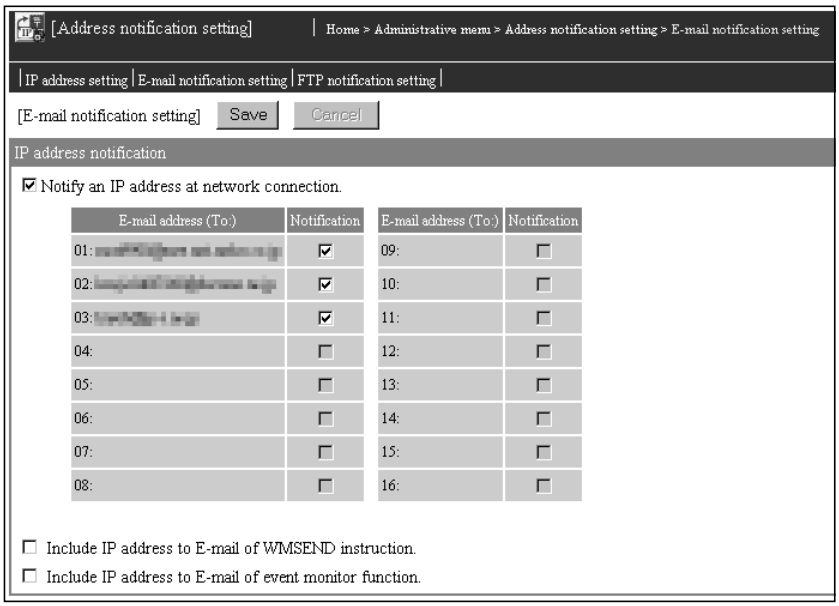
After changing the settings, make sure to click on the "Save" button.

The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.

(2) E-mail notification setting

Make e-mail notification setting.

[Setting Screen]



[Setting Item]

Item	Description
IP address notification	Sets the destination e-mail address and address notification timing.
Save	Saves the setting. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.
Cancel	Discards the changed setting and returns to the previous setting.

(a) IP address notification: Notify an IP address at network connection.

1) Address notification is made to the selected destination e-mail address when connecting to network.
2) The destination e-mail address set in the e-mail setting can be selected.

(b) IP address notification: Include IP address to e-mail of WMSEND instruction.

When this setting is valid, e-mail is sent by the WMSEND instruction with URL data attached at the end of the main text.

(c) IP address notification: Include an IP address to e-mail of event monitor function.

When this setting is valid, e-mail is sent with URL data attached at the end of the main text when an event occurs.

POINT

After changing the settings, make sure to click on the "Save" button.
The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.

[Execution of address notification]

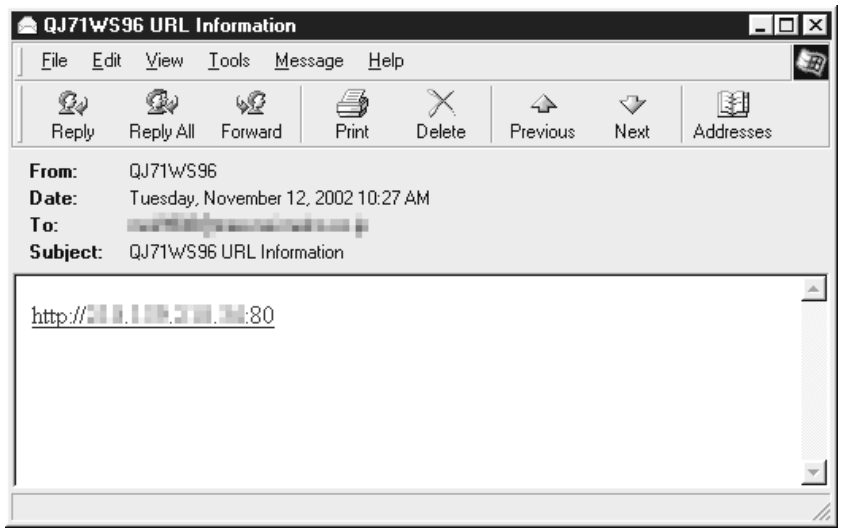
(a) When the external device is notified of the IP address when network connection is made

1) Address notification e-mail is sent to the selected destination e-mail address when network connection is made.

2) The send e-mail form is as indicated below.

Item	Description
E-mail address (From:)	E-mail address of the Web server module
Subject	QJ71WS96 URL Information
Main text	http://"IP address":"HTTP port number"
Attached file	None

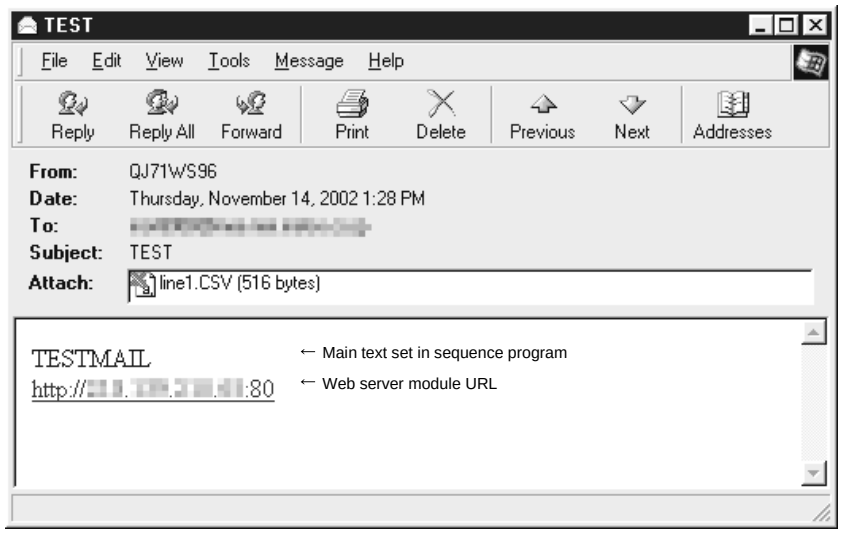
3) E-mail is received by the personal computer.
(Example) In the case of Microsoft® Corporation's Outlook® Express 5.5


QJ71WS96 URL Information
File Edit View Tools Message Help
Reply Reply All Forward Print Delete Previous Next Addresses
From: QJ71WS96
Date: Tuesday, November 12, 2002 10:27 AM
To:
Subject: QJ71WS96 URL Information
http://[redacted]:80

(b) When the IP address is attached to the e-mail of the WMSEND instruction

1) When e-mail is sent by the WMSEND instruction, it is sent with URL data attached at the end of the main text.

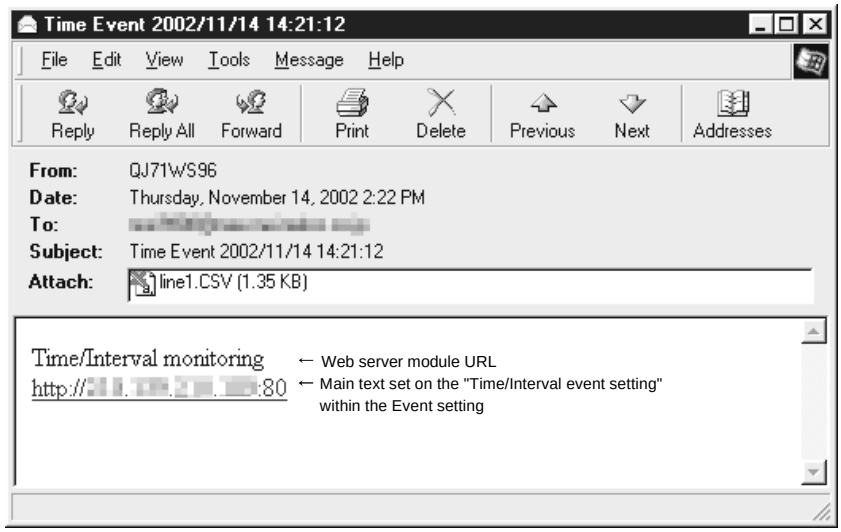
2) E-mail is received by the personal computer.
(Example) In the case of Microsoft® Corporation's Outlook® Express 5.5



(c) When the IP address is attached to the e-mail of the event monitor function

1) When e-mail is sent at event occurrence, it is sent with URL data attached at the end of the main text.

2) E-mail is received by the personal computer.
The following provides an example when a time/interval event.
(Example) In the case of Microsoft® Corporation's Outlook® Express 5.5


Time Event 2002/11/14 14:21:12
File Edit View Tools Message Help
Reply Reply All Forward Print Delete Previous Next Addresses
From: QJ71WS96
Date: Thursday, November 14, 2002 2:22 PM
To:
Subject: Time Event 2002/11/14 14:21:12
Attach: line1.CSV (1.35 KB)
Time/Interval monitoring
http://[redacted]:80
← Web server module URL
← Main text set on the "Time/Interval event setting" within the Event setting

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(3) FTP notification setting

Make FTP notification setting.

[Setting Screen]

[Setting Item]

Item	Description
IP address notification	Sets the target FTP server.
Option setting	Sets the option related to FTP notification.
Save	Saves the setting. The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.
Cancel	Discards the changed setting and returns to the previous setting.

(a) IP address notification: Notify an IP address at network connection.

1) Address notification is made to the selected transfer destination FTP server when connecting to network.
2) The target FTP server set in the FTP setting can be selected.

(b) Option setting

1) Notification file name (1 to 8 characters)
   - Set the file name of the HTML file to be transferred to the FTP server. (Default: QJ71WS96)
   - Refer to Appendix 4 (3) for the characters available for the notification file name.
2) Link character string (Up to 64 characters)
   - Set the character string for link to the Web server module described in the HTML file. (Default: QJ71WS96)
   - Refer to Appendix 4 (2) for the characters available for the link character string.

POINT

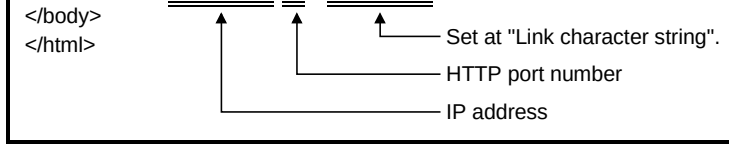
After changing the settings, make sure to click on the "Save" button.

The settings are updated when the "Update" button on the Setting update screen is clicked, the PLC is powered off and then on, or the CPU module is reset.

[Execution of address notification]

1) Address notification is made to the selected transfer destination FTP server when connecting to network.
2) The file data transferred to the FTP server is as indicated below.
   File name : QJ71WS96.HTM (Set at "Notification file name".)
   File data :

```
<html>
<head>
<title>
QJ71WS96 URL Information</title>
</head>
<body>
<a href="http://192.168.3.3:80">QJ71WS96</a>
</body>
</html>
```



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6.10 Data Management Function

This section explains the data management function designed to operate the Compact Flash™ card set in the Compact Flash™ card slot of the Web server module.

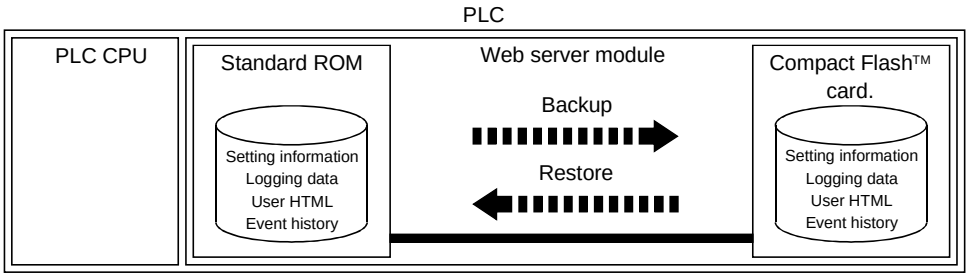
6.10.1 Backup/Restore function

(1) About backup/restore function

Using the Compact Flash™ card, the setting information, logging data, user HTML and event history stored in the standard ROM can be backed up/restored.

(a) File transfer from standard ROM to Compact Flash™ card (backup)
On the data management screen, back up the setting information, logging data, user HTML and event history stored in the standard ROM by transferring them to the Compact Flash™ card.

(b) File transfer from Compact Flash™ card to standard ROM (restore)
On the data management screen, restore the setting information, logging data, user HTML and event history backed up in the Compact Flash™ card by transferring them to the standard ROM.



(2) Backup/restore target directory

The following table shows the data backup/restore target directory using the Compact Flash™ card.
Refer to Appendix 3 for the directory structure of the Web server module.

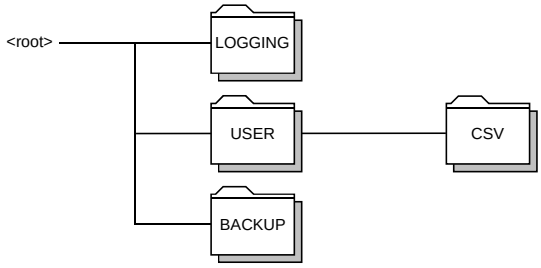
Stored File	Backup/Restore Target Directory
Setting information	/ROM/SETTINGS
Logging Data	/ROM/WWW/LOGGING
User HTML	/ROM/WWW/USER
Event history	/ROM/WWW/EVENT

POINT

The setting data file of the product with first 5 digits of serial No. "05111" or earlier can be restored to the one with first 5 digits of serial No. "05112" or later.
However, the setting data file of the product with first 5 digits of serial No. "05112" or later can not be restored to earlier products.

(3) Directory structure on personal computer

The following shows the directory structure when the Compact Flash™ card storing the backup data is confirmed on the personal computer.



Important

Do not change the backup data (files under \BACKUP\).
Using the changed backup data can cause the module to fail or malfunction.

(4) Setting of Compact Flash™ card

Refer to Section 4.9 for the setting method of the Compact Flash™ card.

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6.10.2 Format function

(1) About format function

The directory required for use in the Web server module can be created by formatting the Compact Flash™ card.

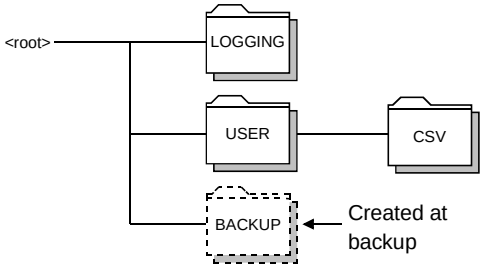
(a) Formatting of Compact Flash™ card

On the data management screen, format the Compact Flash™ card in the MS-DOS media compatible file system form (FAT form) to create the directory required for use in the Web server module.

POINT
When the Compact Flash™ card is formatted, the data stored in the Compact Flash™ card are all deleted.

(2) Directory structure of Compact Flash™ card

With the format function, the following directory is created in the Compact Flash™ card.



(3) Setting of Compact Flash™ card

Refer to Section 4.9 for the setting method of the Compact Flash™ card.

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6.10.3 CSV export/import function

The setting data (various settings of the administrative menu) of the Web server module can be stored into a CSV file and edited using spreadsheet software, etc. on the personal computer.
The edited CSV file can be read to the Web server module to change the setting data.
This function is convenient for editing a screen with many settings, e.g. the component setting.

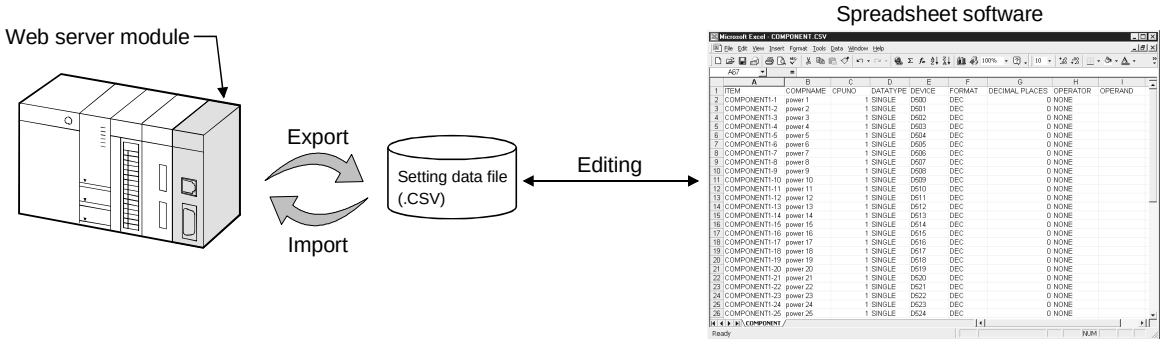
POINT
The setting data of the Web server module can be set in the Web browser. (Refer to Section 4.6.) When making setting from the Web browser, it is not necessary to use this function.

(1) CSV export/import function

(a) CSV export function
Stores the setting data of the Web server module into standard ROM or Compact Flash™ card as a CSV file on the data management screen.

(b) CSV import function
Reads the CSV file of the standard ROM or Compact Flash™ card to the Web server module as the setting data on the data management screen.

Hereafter, the CSV file created with the CSV export function is referred to as "setting data file".



(2) Precautions for use of the CSV export/CSV import function

(a) When editing the setting data file, make sure that the setting data file was exported by CSV export function.
The user should not create a new setting data file.

(b) When executing the CSV import of the setting data file, do as in the procedure given in (3).

(c) While CSV export/import is being executed on Data management, do not switch power from ON to OFF, reset the CPU module, or perform operation in the administrative menu.
Performing any of the above operations can cause the setting data file to be corrupted or erased.

(d) To avoid the possibility of illegal data acquirement from the setting data file that contains the password and other data, delete the setting data file from the standard ROM or Compact Flash™ card after the setting is completed.

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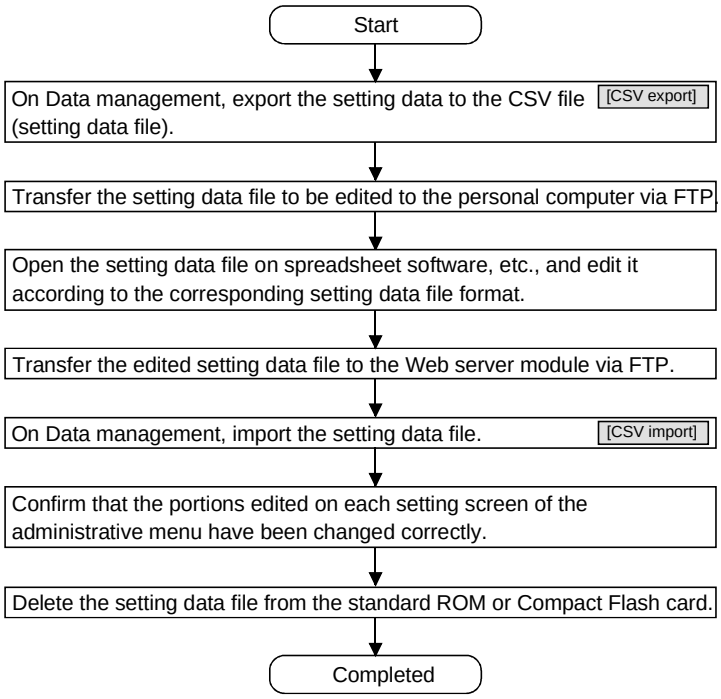
(3) Operation procedure for CSV export/import function

Refer to the setting example in (4) for an entire sequence.


Start
On Data management, export the setting data to the CSV file (setting data file).
[CSV export]
Transfer the setting data file to be edited to the personal computer via FTP
Open the setting data file on spreadsheet software, etc., and edit it according to the corresponding setting data file format.
Refer to Appendix 6 for the setting data file format.
Transfer the edited setting data file to the Web server module via FTP.
On Data management, import the setting data file.
[CSV import]
Confirm that the portions edited on each setting screen of the administrative menu have been changed correctly.
Delete the setting data file from the standard ROM or Compact Flash card.
Completed

- [ ] indicates the setting item on Data management. (Refer to Section 6.10.4.)

(4) Setting example of CSV export/import function

(a) In this example, 50 tag components of tag setting No. 1 are registered. The component settings No. 2 to 50 are newly registered to the tag setting No. 1 where the component setting No. 1 has already been registered. (Refer to Section 6.3.3 for tag setting.)

[Before registration]

[Tag setting] Home > Administrative menu > Tag setting > Component setting

Add Edit Delete Back

Tag name: 01: block A

Item	No.	Component name	CPU name	Data type	Device	Display form	Operator	Operand
○	1	power 1	01: Control CPU	Single word	D500	Decimal(0 decimal places)	None	-
○	2							

→

[After registration]

[Tag setting] Home > Administrative menu > Tag setting > Component setting

Add Edit Delete Back

Tag name: 01: block A

Item	No.	Component name	CPU name	Data type	Device	Display form	Operator	Operand
○	1	power 1	01: Control CPU	Single word	D500	Decimal(0 decimal places)	None	-
○	2	power 2	01: Control CPU	Single word	D501	Decimal(0 decimal places)	None	-
○	3	power 3	01: Control CPU	Single word	D502	Decimal(0 decimal places)	None	-
○	4	power 4	01: Control CPU	Single word	D503	Decimal(0 decimal places)	None	-
○	5	power 5	01: Control CPU	Single word	D504	Decimal(0 decimal places)	None	-
○	6	power 6	01: Control CPU	Single word	D505	Decimal(0 decimal places)	None	-
○	7	power 7	01: Control CPU	Single word	D506	Decimal(0 decimal places)	None	-
○	8	power 8	01: Control CPU	Single word	D507	Decimal(0 decimal places)	None	-
○	9	power 9	01: Control CPU	Single word	D508	Decimal(0 decimal places)	None	-
○	10	power 10	01: Control CPU	Single word	D509	Decimal(0 decimal places)	None	-
⋮								
○	45	power 45	01: Control CPU	Single word	D544	Decimal(0 decimal places)	None	-
○	46	power 46	01: Control CPU	Single word	D545	Decimal(0 decimal places)	None	-
○	47	power 47	01: Control CPU	Single word	D546	Decimal(0 decimal places)	None	-
○	48	power 48	01: Control CPU	Single word	D547	Decimal(0 decimal places)	None	-
○	49	power 49	01: Control CPU	Single word	D548	Decimal(0 decimal places)	None	-
○	50	power 50	01: Control CPU	Single word	D549	Decimal(0 decimal places)	None	-
○	51							

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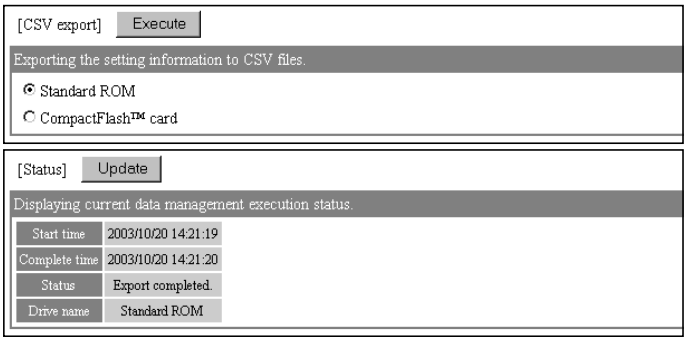
(b) Operation procedure

(Start)

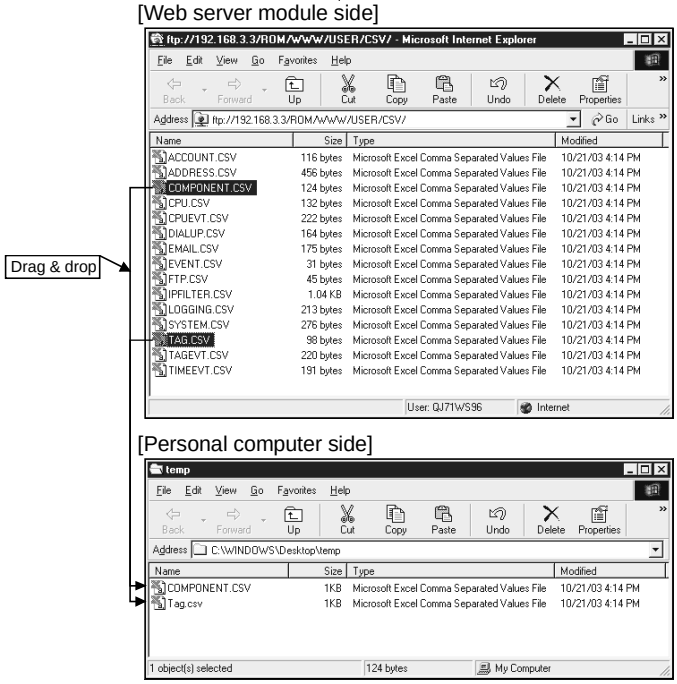
↓



1) On Data management, export the setting data file to the standard ROM.
(Refer to Section 6.10.4 (4) for execution of CSV export.)

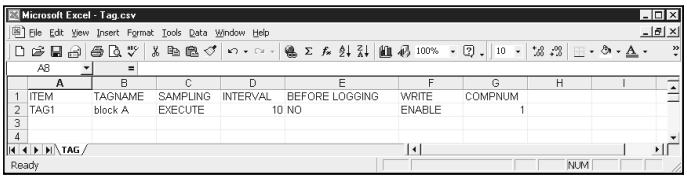
↓

[Web server module side]



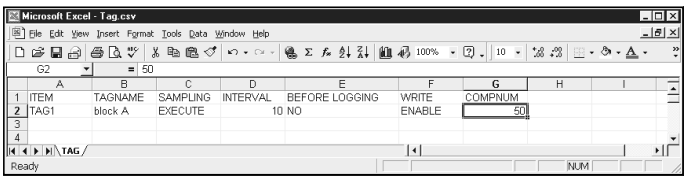
2) Transfer TAG.CSV and COMPONENT.CSV on /ROM/WWW/USER/CSV to the personal computer via FTP.
(Refer to Section 6.7.1 for FTP.)

↓


Microsoft Excel - Tag.csv
ITEM TAGNAME SAMPLING INTERVAL BEFORE LOGGING WRITE COMPNUM
TAG1 block A EXECUTE 10 NO ENABLE 1

3) Open TAG.CSV on the spreadsheet software.
(Display example of Microsoft® EXCEL 2000 is shown on the left)

↓


Microsoft Excel - Tag.csv
ITEM TAGNAME SAMPLING INTERVAL BEFORE LOGGING WRITE COMPNUM
TAG1 block A EXECUTE 10 NO ENABLE 50

4) Change COMPNUM of TAG1 from 1 to 50.
5) Save new TAG.CSV over old TAG.CSV in CSV format.
(Display example of Microsoft® EXCEL 2000 is shown on the left)

↓

(To next page)

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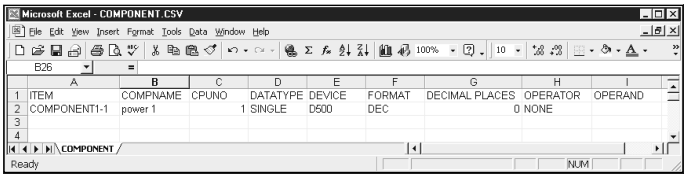
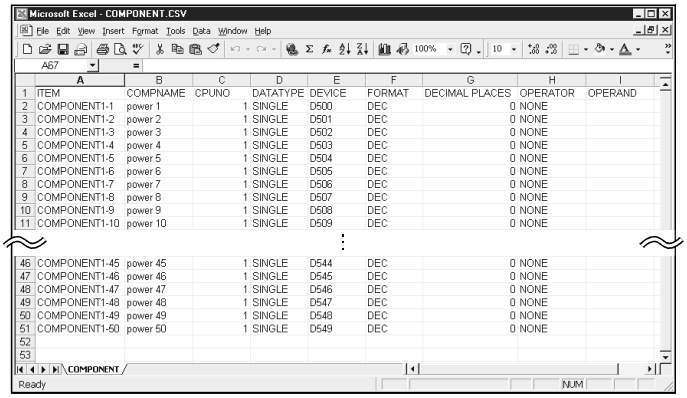
(From previous page)

↓


Microsoft Excel - COMPONENT.CSV
ITEM COMPNAME CPUNO DATATYPE DEVICE FORMAT DECIMAL PLACES OPERATOR OPERAND
COMPONENT1-1 power 1 1 SINGLE D500 DEC 0 NONE
COMPONENT
Ready

6) Open COMPONENT.CSV on the spreadsheet software.
(Display example of Microsoft© EXCEL 2000 is shown on the left)

↓

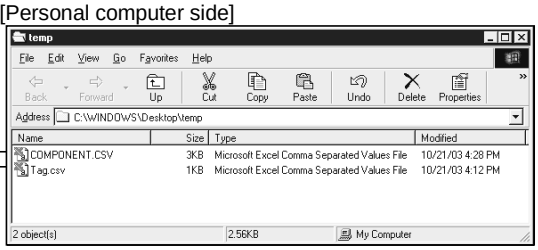

Microsoft Excel - COMPONENT.CSV
COMPONENT1-1 power 1 1 SINGLE D500 DEC 0 NONE
COMPONENT1-2 power 2 1 SINGLE D501 DEC 0 NONE
COMPONENT1-3 power 3 1 SINGLE D502 DEC 0 NONE
COMPONENT1-4 power 4 1 SINGLE D503 DEC 0 NONE
COMPONENT1-5 power 5 1 SINGLE D504 DEC 0 NONE
COMPONENT1-6 power 6 1 SINGLE D505 DEC 0 NONE
COMPONENT1-7 power 7 1 SINGLE D506 DEC 0 NONE
COMPONENT1-8 power 8 1 SINGLE D507 DEC 0 NONE
COMPONENT1-9 power 9 1 SINGLE D508 DEC 0 NONE
COMPONENT1-10 power 10 1 SINGLE D509 DEC 0 NONE
COMPONENT1-45 power 45 1 SINGLE D544 DEC 0 NONE
COMPONENT1-46 power 46 1 SINGLE D545 DEC 0 NONE
COMPONENT1-47 power 47 1 SINGLE D546 DEC 0 NONE
COMPONENT1-48 power 48 1 SINGLE D547 DEC 0 NONE
COMPONENT1-49 power 49 1 SINGLE D548 DEC 0 NONE
COMPONENT1-50 power 50 1 SINGLE D549 DEC 0 NONE
COMPONENT
Ready

7) Copy the row of COMPONENT1-1 to create COMPONENT1-2 to COMPONENT1-50.
Change COMPNAME and DEVICE on each row.

8) Save new COMPONENT.CSV over old COMPONENT.CSV in CSV format.
(Display example of Microsoft© EXCEL 2000 is shown on the left)

↓

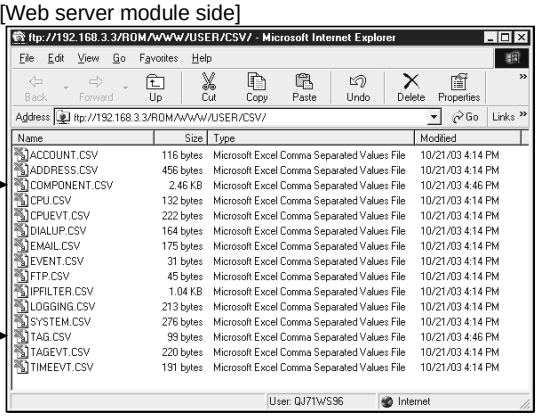
[Personal computer side]


temp
Address C:\WINDOWS\Desktop\temp
COMPONENT.CSV 3KB Microsoft Excel Comma Separated Values File 10/21/03 4:28 PM
Tag.csv 1KB Microsoft Excel Comma Separated Values File 10/21/03 4:12 PM
2 object(s)
2.56KB
My Computer

9) Transfer TAG.CSV and COMPONENT.CSV on the personal computer to /ROM/WWW/USER/CSV via FTP.
(Refer to Section 6.7.1 for FTP.)

Drag & drop

[Web server module side]


ftp://192.168.3.3/ROM/WWW/USER/CSV/ - Microsoft Internet Explorer
Address ftp://192.168.3.3/ROM/WWW/USER/CSV/
ACCOUNT.CSV 116 bytes Microsoft Excel Comma Separated Values File 10/21/03 4:14 PM
ADDRESS.CSV 456 bytes Microsoft Excel Comma Separated Values File 10/21/03 4:14 PM
COMPONENT.CSV 2.46 KB Microsoft Excel Comma Separated Values File 10/21/03 4:46 PM
CPU.CSV 132 bytes Microsoft Excel Comma Separated Values File 10/21/03 4:14 PM
CPUEVT.CSV 222 bytes Microsoft Excel Comma Separated Values File 10/21/03 4:14 PM
DIALUP.CSV 164 bytes Microsoft Excel Comma Separated Values File 10/21/03 4:14 PM
EMAIL.CSV 175 bytes Microsoft Excel Comma Separated Values File 10/21/03 4:14 PM
EVENT.CSV 31 bytes Microsoft Excel Comma Separated Values File 10/21/03 4:14 PM
FTP.CSV 45 bytes Microsoft Excel Comma Separated Values File 10/21/03 4:14 PM
IPFILTER.CSV 1.04 KB Microsoft Excel Comma Separated Values File 10/21/03 4:14 PM
LOGGING.CSV 213 bytes Microsoft Excel Comma Separated Values File 10/21/03 4:14 PM
SYSTEM.CSV 276 bytes Microsoft Excel Comma Separated Values File 10/21/03 4:14 PM
TAG.CSV 99 bytes Microsoft Excel Comma Separated Values File 10/21/03 4:46 PM
TAGEVT.CSV 220 bytes Microsoft Excel Comma Separated Values File 10/21/03 4:14 PM
TIMEEVT.CSV 191 bytes Microsoft Excel Comma Separated Values File 10/21/03 4:14 PM
User: QJ71WS96
Internet

↓

(To next page)

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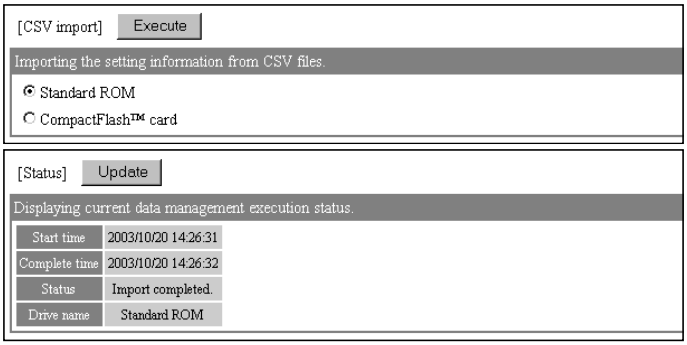
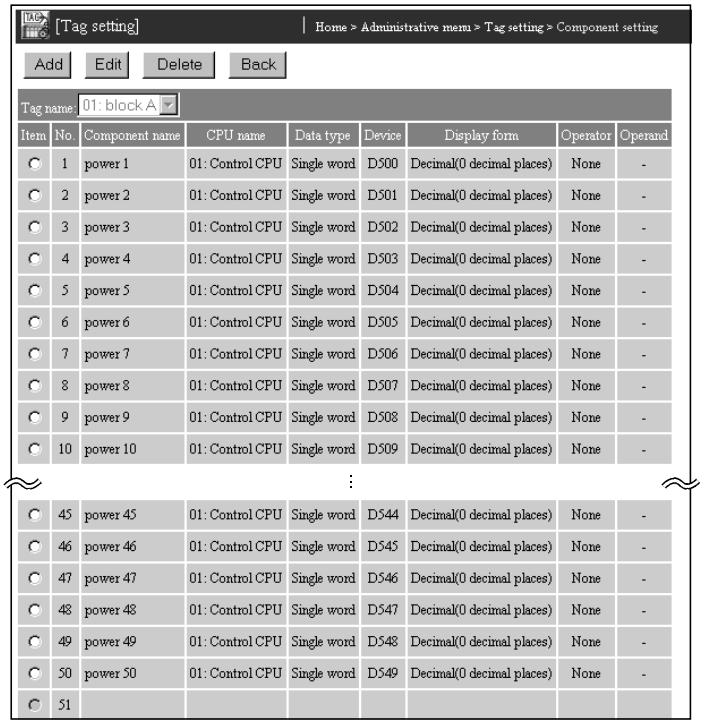
(From previous page)

↓



10) On Data management, import the setting data file from the standard ROM.
(Refer to Section 6.10.4 (5) for execution of CSV import.)

↓


[Tag setting]
Home > Administrative menu > Tag setting > Component setting
Add
Edit
Delete
Back
Tag name: 01: block A
Item | No. | Component name | CPU name | Data type | Device | Display form | Operator | Operand
1 | power 1 | 01: Control CPU | Single word | D500 | Decimal(0 decimal places) | None | -
2 | power 2 | 01: Control CPU | Single word | D501 | Decimal(0 decimal places) | None | -
3 | power 3 | 01: Control CPU | Single word | D502 | Decimal(0 decimal places) | None | -
4 | power 4 | 01: Control CPU | Single word | D503 | Decimal(0 decimal places) | None | -
5 | power 5 | 01: Control CPU | Single word | D504 | Decimal(0 decimal places) | None | -
6 | power 6 | 01: Control CPU | Single word | D505 | Decimal(0 decimal places) | None | -
7 | power 7 | 01: Control CPU | Single word | D506 | Decimal(0 decimal places) | None | -
8 | power 8 | 01: Control CPU | Single word | D507 | Decimal(0 decimal places) | None | -
9 | power 9 | 01: Control CPU | Single word | D508 | Decimal(0 decimal places) | None | -
10 | power 10 | 01: Control CPU | Single word | D509 | Decimal(0 decimal places) | None | -
45 | power 45 | 01: Control CPU | Single word | D544 | Decimal(0 decimal places) | None | -
46 | power 46 | 01: Control CPU | Single word | D545 | Decimal(0 decimal places) | None | -
47 | power 47 | 01: Control CPU | Single word | D546 | Decimal(0 decimal places) | None | -
48 | power 48 | 01: Control CPU | Single word | D547 | Decimal(0 decimal places) | None | -
49 | power 49 | 01: Control CPU | Single word | D548 | Decimal(0 decimal places) | None | -
50 | power 50 | 01: Control CPU | Single word | D549 | Decimal(0 decimal places) | None | -
51

11) On Tag setting, confirm that the edited portions have been changed correctly.

↓

12) Delete the setting data file from the standard ROM.

↓

(Completed)

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6.10.4 Data management

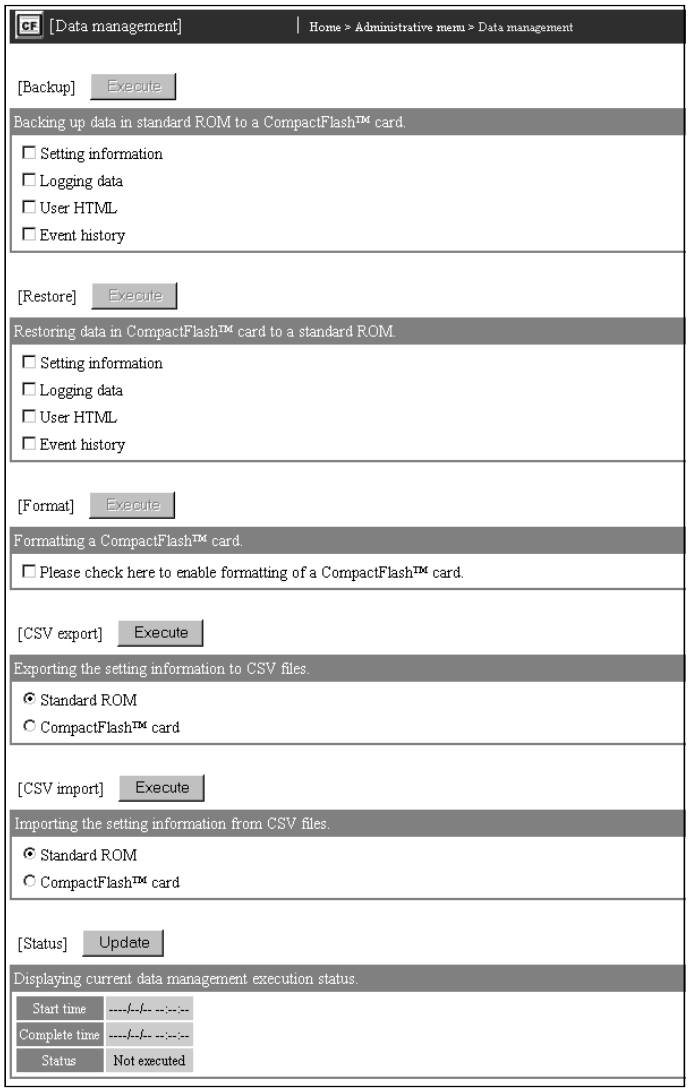
[Setting Purpose]

In data management, the backup/restore/format operation using the Compact Flash™ card and the export/import operation of the setting data file can be performed.

[Start Procedure]

[Administrative menu] → "Data management"

[Setting Screen]



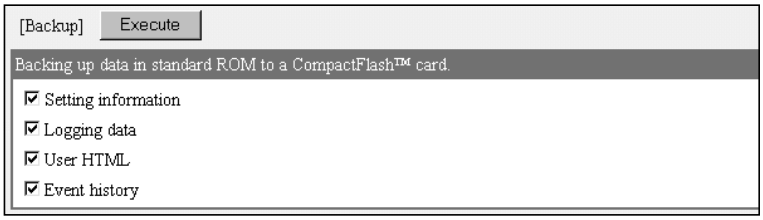
[Setting Item]

Item	Description
Backup	Backing up the standard ROM data to the Compact Flash™ card.
Restore	Restoring the backup data of the Compact Flash™ card to the standard ROM.
Format	Formatting the Compact Flash™ card.
CSV export	Exporting the setting data to the CSV file.
CSV import	Importing the setting data from the CSV file.
Status	Displaying current data management execution status.

(1) Execution of backup

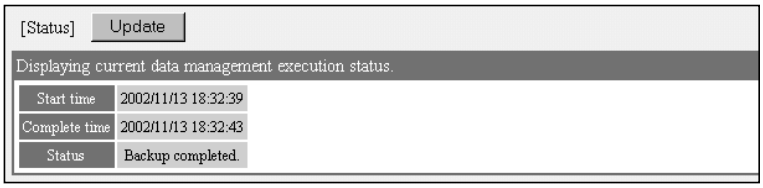
Back up the standard ROM data to the Compact Flash™ card.

(a) Select the standard ROM data to be backed up.



(b) Click on the "Execute" button to execute backup.

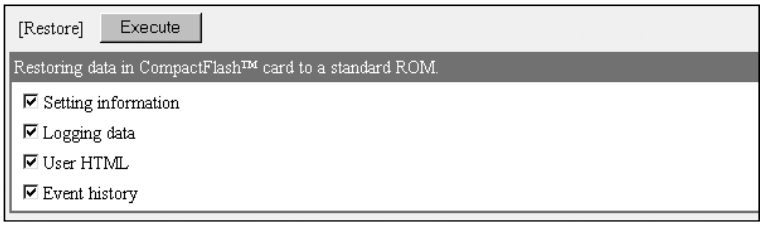
(c) On the Status section, confirm the backup execution status.
Click on the "Update" button to confirm the current status.
When "Backing up..." appears, click on the "Update" button again to confirm that the executed operation has been completed.
Backup completed : Backup is completed. Perform the next processing.
Backup failed : According to the error code, confirm the error definition and take corrective action. (Refer to Section 9.3)



(2) Execution of restore

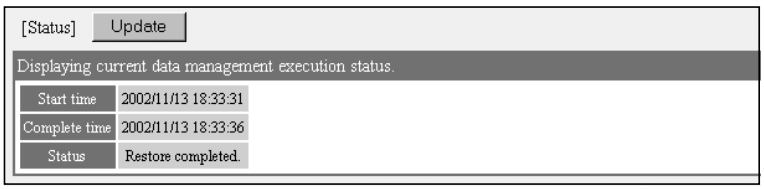
Restore the backup data of the Compact Flash™ card to the standard ROM.

(a) Select the backup data to be restored.



(b) Click on the "Execute" button to execute restore.

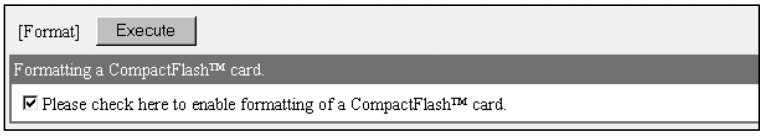
(c) On the Status section, confirm the restore execution status.
Click on the "Update" button to confirm the current status.
When "Restoring ..." appears, click on the "Update" button again to confirm that the executed operation has been completed.
Restore completed : Restore is completed. Perform the next processing.
Restore failed : According to the error code, confirm the error definition and take corrective action. (Refer to Section 9.3)



(3) Execution of format

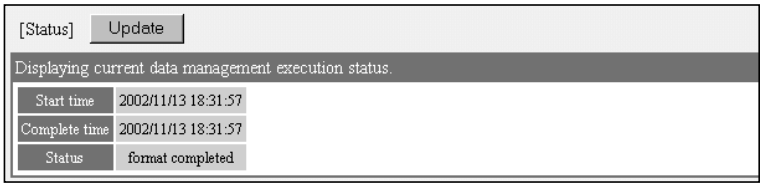
Format the Compact Flash™ card.

(a) Select "Formatting a Compact Flash™ card."



(b) Click on the "Execute" button to execute format.

(c) On the Status section, confirm the format execution status.
Click on the "Update" button to confirm the current status.
When "Formatting ..." appears, click on the "Update" button again to confirm that the executed operation has been completed.
Format completed : Format is completed. Perform the next processing.
Format failed : According to the error code, confirm the error definition and take corrective action. (Refer to Section 9.3)



POINT

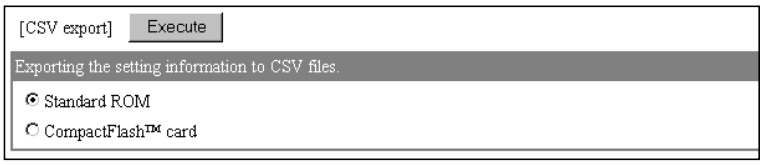
(1) Depending on the data volume to be backed up/restored, it may take some time until the processing is completed.
Start the next processing after confirming that the executed operation has been completed on the Status section.

(2) When the Compact Flash™ card is formatted, the data stored in the Compact Flash™ card are all deleted.

(4) Execution of CSV export

Export the setting data to the CSV file.

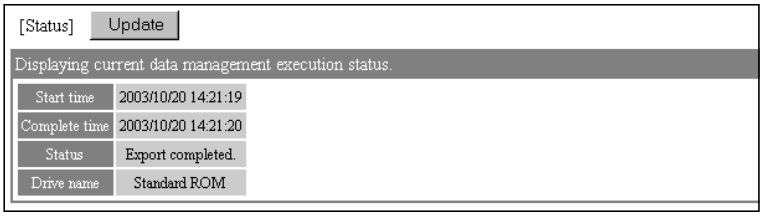
(a) Select the standard ROM or Compact Flash™ card, as a location from which the setting data file will be exported.



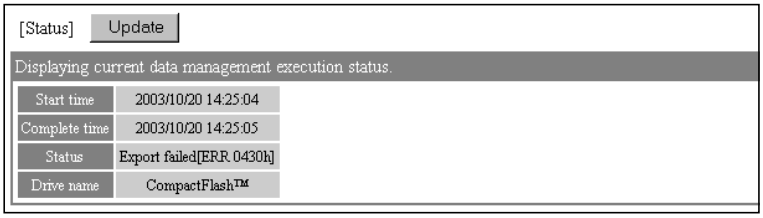
(b) Click the [Execute] button to execute CSV export.

(c) On Status, confirm the CSV export execution status.
As the drive name, the destination drive name (standard ROM or Compact Flash card) is displayed.
Click the [Update] button to confirm the current status.
When "CSV export is being executed", click the [Update] button again to confirm that the executed operation is completed.

1) When normally completed
CSV export is complete. Start the next processing.



2) When abnormally completed
- According to the error code, confirm the error status and take corrective action. (Refer to Section 9.3.)
- According to the file name, label name or item name, confirm the error-detected location, and reexamine the setting.



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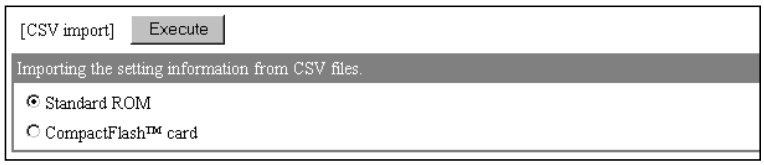
(5) Execution of CSV import

Import the setting data from the CSV file.

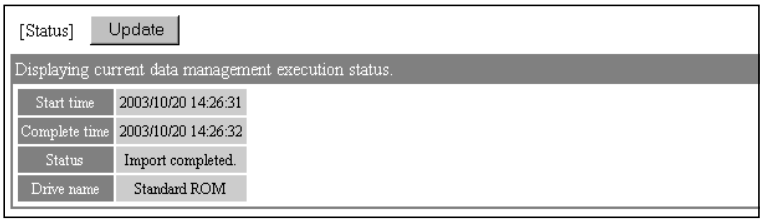
(a) Select the standard ROM or Compact Flash™ card, as a location to which the setting data file is imported.



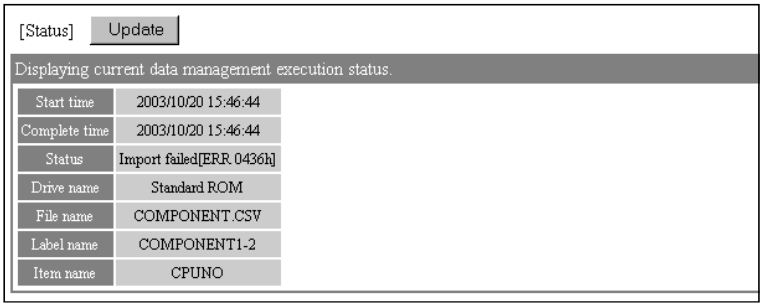
(b) Click the [Execute] button to execute CSV import.

(c) On Status, confirm the CSV import execution status.
As the drive name, the source drive name (standard ROM or Compact Flash card) is displayed.
Click the [Update] button to confirm the current status.
When "CSV import is being executed", click the [Update] button again to confirm that the executed operation is completed.

1) When normally completed
CSV import is complete. Start the next processing.



2) When abnormally completed
- According to the error code, confirm the error status and take corrective action. (Refer to Section 9.3.)
- According to the file name, label name or item name, confirm the error-detected location, and reexamine the setting.



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6.11 Diagnostics Function

This section explains the function to diagnose the hardware fault and setting of the Web server module.

6.11.1 Diagnostics function

The following explains the method to diagnose the hardware fault and setting of the Web server module.

(1) Self-diagnostics test by switch setting of GX Developer (refer to Section 4.8)
A self-diagnostics test can be conducted by switch setting of GX Developer.
(a) CH1 self-loopback test (refer to Section 4.8.1)
Conduct a self-loopback test to make a hardware check including the communication function of the CH1 (10BASE-T/100BASE-TX interface).

(b) CH2 self-loopback test (refer to Section 4.8.2)
Conduct a self-loopback test to make a hardware check including the communication function of the CH2 (RS-232 interface).

(c) Hardware test (refer to Section 4.8.3)
Conduct a test related to the ROM/RAM/switch setting of the Web server module.

(2) Setting test by Web browser (refer to Section 6.11.2)
On the Setting test screen of the Administrative menu, an access target CPU test, e-mail sending test, etc. can be performed from the Web server module.
(a) Access target CPU test
Whether normal access can be made to the access target PLC CPU set in the access target CPU setting is confirmed.

(b) E-mail sending test
E-mail is sent to the destination e-mail address set in the e-mail setting to confirm the e-mail send status.

(c) File transfer test
A test file is transferred to the FTP server set in the FTP setting to confirm the file transfer status.

(d) PING test
The PING command is issued to the specified external device (mail server, FTP server, etc.) to confirm the existence of the external device.

(3) PING test by IBM-PC/AT-compatible personal computer (refer to Section 6.11.3)
The PING command can be issued from the external device (IBM-PC/AT-compatible personal computer) to the Web server module to confirm the existence of the Web server module.

6.11.2 Setting test

[Setting Purpose]

1) An access target CPU test confirms whether normal access can be made to the access target PLC CPU set in the access target CPU setting.
2) An e-mail sending test sends e-mail to the destination e-mail address set in the e-mail setting to confirm the e-mail transmission status.
3) A file transfer test transfers a test file to the FTP server set in the FTP setting to confirm the file transfer status.
4) A PING test issues the PING command to the specified external device (mail server, FTP server, etc.) to confirm the existence of the external device.

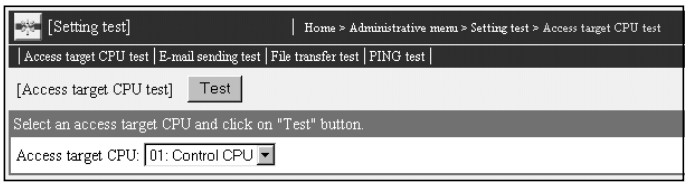
[Start Procedure]

1) Access target CPU test (refer to (1))
   [Administrative menu] → "Setting test" → <<Access target CPU test>> tab → "Access target CPU test"
2) E-mail sending test (refer to (2))
   [Administrative menu] → "Setting test" → <<E-mail sending test>> tab → "E-mail sending test"
3) File transfer test (refer to (3))
   [Administrative menu] → "Setting test" → <<File transfer test>> tab → "File transfer test"
4) PING test (refer to (4))
   [Administrative menu] → "Setting test" → <<PING test>> tab → "PING test"

(1) Access target CPU test

Conduct an access target CPU test.

[Setting Screen]


[Setting test]
Home > Administrative menu > Setting test > Access target CPU test
Access target CPU test | E-mail sending test | File transfer test | PING test
[Access target CPU test]
Test
Select an access target CPU and click on "Test" button.
Access target CPU:
01: Control CPU

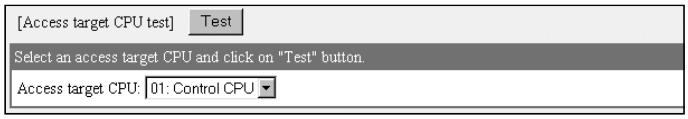
[Setting Item]

Item	Description
Access target CPU	Sets the access target CPU.
Test	Conducts an access target CPU test.

[Test execution]

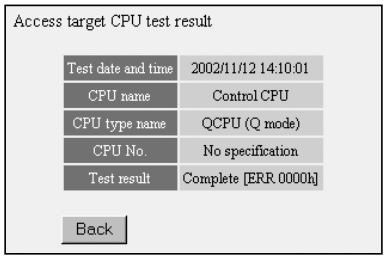
Conduct an access target CPU test.

1) Select the access target CPU set in the access target CPU setting.

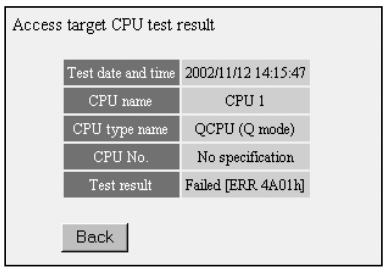


2) Click on the "Test" button to execute the access target CPU test.

3) The access target CPU test result is displayed.
When the test has abnormally completed, confirm the error definition and take corrective action according to the error code.


Access target CPU test result
Test date and time 2002/11/12 14:10:01
CPU name Control CPU
CPU type name QCPU (Q mode)
CPU No. No specification
Test result Complete [ERR 0000h]
Back

When normally completed

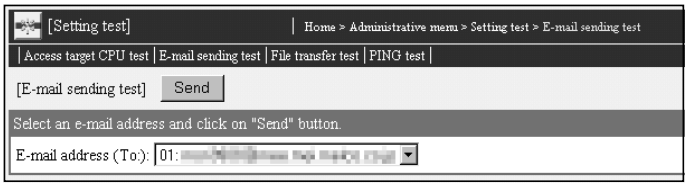

Access target CPU test result
Test date and time 2002/11/12 14:15:47
CPU name CPU 1
CPU type name QCPU (Q mode)
CPU No. No specification
Test result Failed [ERR 4A01h]
Back

When abnormally completed

(2) E-mail sending test

Conduct an e-mail sending test.

[Setting Screen]


[Setting test]
Home > Administrative menu > Setting test > E-mail sending test
Access target CPU test | E-mail sending test | File transfer test | PING test
[E-mail sending test]
Send
Select an e-mail address and click on "Send" button.
E-mail address (To:):
01:

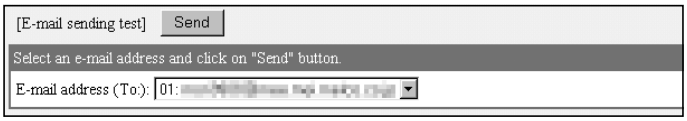
[Setting Item]

Item	Description
E-mail address (TO:)	Sets the destination e-mail address.
Send	Conducts an e-mail sending test.

[Test execution]

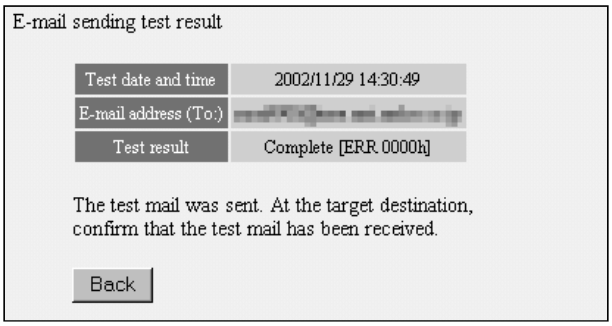
Conduct an e-mail sending test.

1) Select the destination e-mail address set in the e-mail setting.

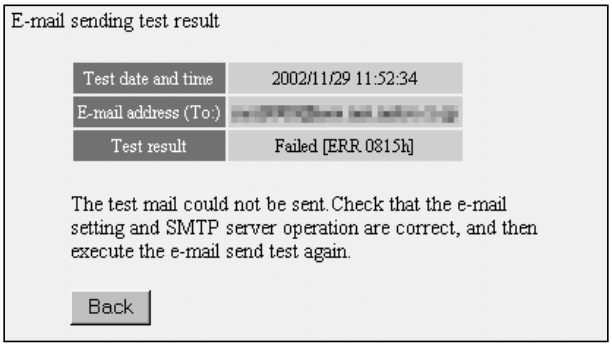


2) Click on the "Send" button to execute the e-mail sending test.

3) The e-mail sending test result is displayed.
When the test has abnormally completed, confirm the error definition and take corrective action according to the error code.


E-mail sending test result
Test date and time
2002/11/29 14:30:49
E-mail address (To:)
Test result
Complete [ERR.0000h]
The test mail was sent. At the target destination, confirm that the test mail has been received.
Back

When normally completed


E-mail sending test result
Test date and time
2002/11/29 11:52:34
E-mail address (To:)
Test result
Failed [ERR.0815h]
The test mail could not be sent. Check that the e-mail setting and SMTP server operation are correct, and then execute the e-mail send test again.
Back

When abnormally completed

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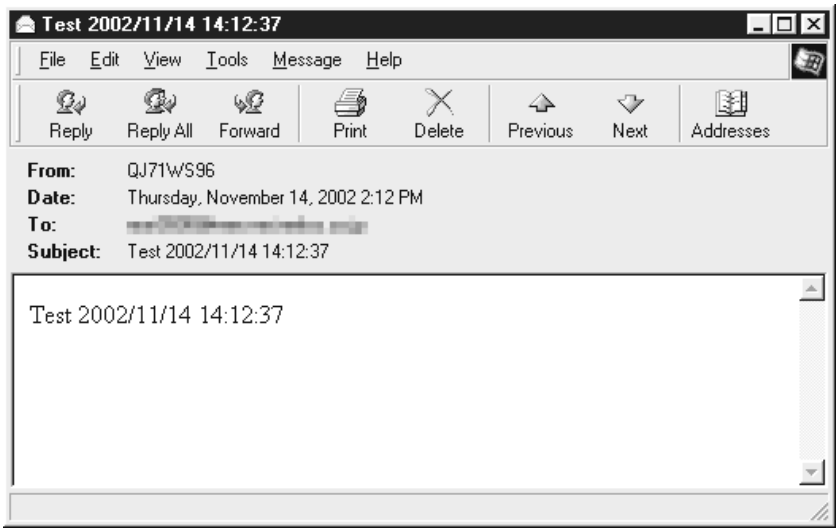
4) E-mail is received by the personal computer.
The e-mail form sent by the Web server module is as indicated below.

Item	Description
Subject	Test "Date" (Example) Test 2002/07/22 10:09:15
Main text	Same as in Subject
Attached file	None

(Example) In the case of Microsoft® Corporation's Outlook® Express 5.5


Test 2002/11/14 14:12:37
File Edit View Tools Message Help
Reply Reply All Forward Print Delete Previous Next Addresses
From: QJ71WS96
Date: Thursday, November 14, 2002 2:12 PM
To:
Subject: Test 2002/11/14 14:12:37
Test 2002/11/14 14:12:37

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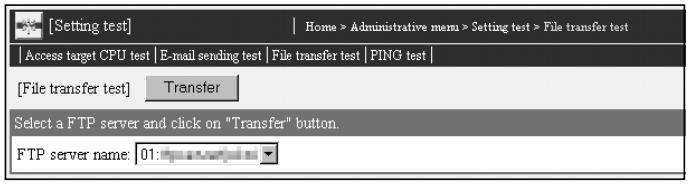
(3) File transfer test

Conduct a file transfer test.

[Setting Screen]


[Setting test]
Home > Administrative menu > Setting test > File transfer test
Access target CPU test | E-mail sending test | File transfer test | PING test
[File transfer test]
Transfer
Select a FTP server and click on "Transfer" button.
FTP server name:
01:

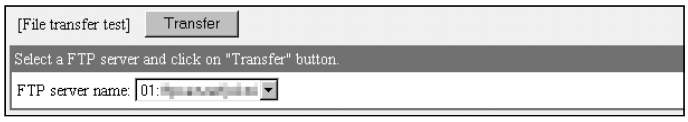
[Setting Item]

Item	Description
FTP server name	Sets the FTP server name.
Transfer	Conducts a file transfer test.

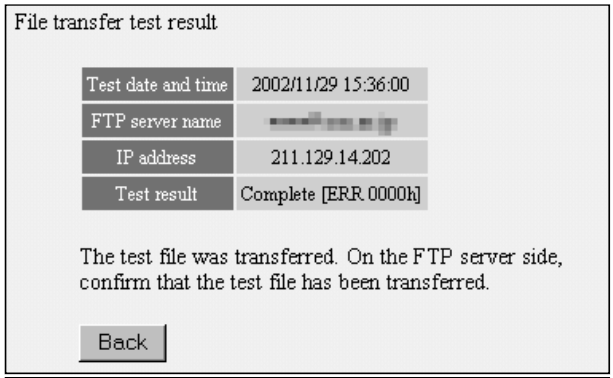
[Test execution]

Conduct a file transfer test.

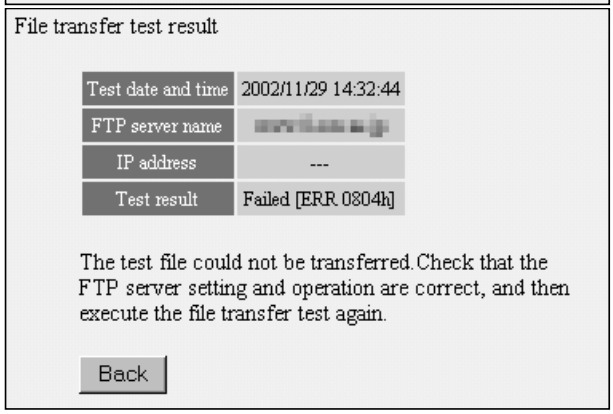
1) Select the FTP server name set in the FTP setting.



2) Click on the "Transfer" button to execute the file transfer test.
3) The file transfer test result is displayed.
When the test has abnormally completed, confirm the error definition and take corrective action according to the error code.



When normally completed


File transfer test result
Test date and time
2002/11/29 14:32:44
FTP server name
IP address

Test result
Failed [ERR.0804h]
The test file could not be transferred. Check that the FTP server setting and operation are correct, and then execute the file transfer test again.
Back

When abnormally completed

4) The file data transferred to the FTP server is as indicated below.
File name : QJ71WS96.HTM
File data : (Example) Test 2002/07/27 14:35:34

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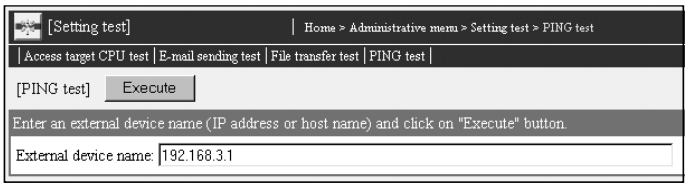
(4) PING test

Conduct a PING test.

[Setting Screen]


[Setting test]
Home > Administrative menu > Setting test > PING test
Access target CPU test | E-mail sending test | File transfer test | PING test
[PING test]
Execute
Enter an external device name (IP address or host name) and click on "Execute" button.
External device name: 192.168.3.1

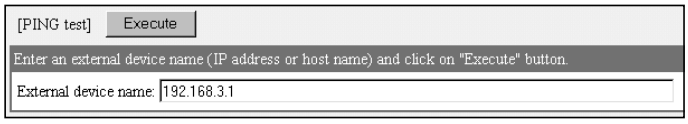
[Setting Item]

Item	Description
External device name	Sets the external device name.
Execute	Conducts a PING test.

[Test execution]

Conduct a PING test.

1) Set the external device name using the IP address or host name (domain name).


[PING test]
Execute
Enter an external device name (IP address or host name) and click on "Execute" button.
External device name: 192.168.3.1

When using the host name for setting, make the following setting. (*) Refer to Appendix 4 (2) for the characters applicable to the external device name.

- Enter all the host and domain into the external device name setting column.

(Example) user001.****.ne.jp

Host Domain

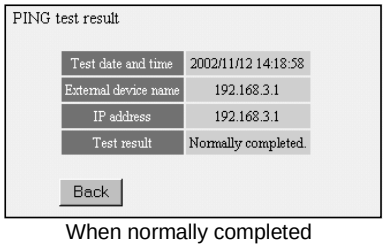
* When using the host name for setting, it is required to set the DNS server in "DNS server setting" of the system setting. (Refer to Section 4.6.3)

2) Click on the "Execute" button to execute the PING test.

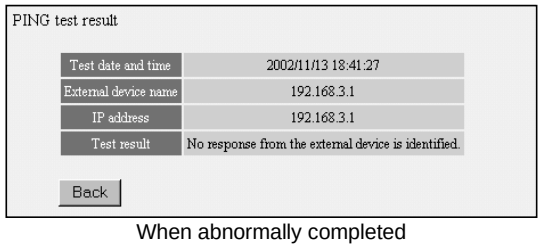
3) The PING test result is displayed.

When the test has abnormally completed, confirm the following and conduct the PING test again.

- Network setting of the Web server module or external device
- Connection status of the Web server module or external device



When normally completed


PING test result
Test date and time 2002/11/13 18:41:27
External device name 192.168.3.1
IP address 192.168.3.1
Test result No response from the external device is identified.
Back

When abnormally completed

6.11.3 PING test by IBM-PC/AT-compatible personal computer

The following provides an example that the PING command is issued from the external device (IBM-PC/AT-compatible personal computer) to the Web server module connected to the same Ethernet (LAN) to confirm the existence of the Web server module. (Example of confirming the Web server module by the external device at the same network address)

(1) Specifying method

PING "IP address"

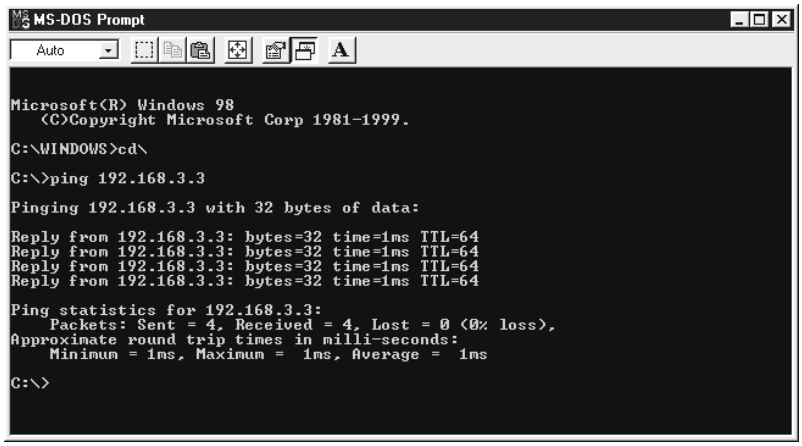
(2) Example of PING test execution

IP address of Web server module: 192. 168. 3.3

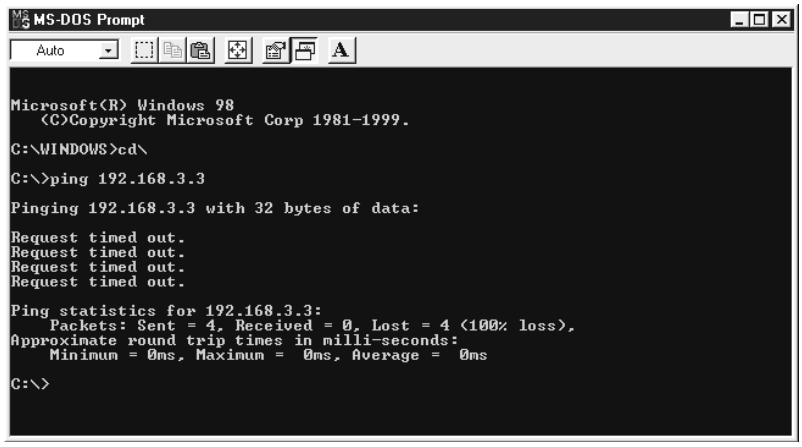
When the test has abnormally completed, confirm the following and conduct the PING test again.

- Network setting of the Web server module or external device
- Connection status of the Web server module or external device

(Example) In the case of Microsoft© Windows© 98 operating system


MS-DOS Prompt
Auto
Microsoft(R) Windows 98
(C)Copyright Microsoft Corp 1981-1999.
C:\WINDOWS>cd\
C:\>ping 192.168.3.3
Pinging 192.168.3.3 with 32 bytes of data:
Reply from 192.168.3.3: bytes=32 time=1ms TTL=64
Reply from 192.168.3.3: bytes=32 time=1ms TTL=64
Reply from 192.168.3.3: bytes=32 time=1ms TTL=64
Reply from 192.168.3.3: bytes=32 time=1ms TTL=64
Ping statistics for 192.168.3.3:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 1ms, Maximum = 1ms, Average = 1ms
C:\>

When normally completed


MS-DOS Prompt
Auto
Microsoft(R) Windows 98
(C)Copyright Microsoft Corp 1981-1999.
C:\WINDOWS>cd\
C:\>ping 192.168.3.3
Pinging 192.168.3.3 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 192.168.3.3:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>

When abnormally completed

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7 USER SCREEN CREATION FUNCTION

This chapter explains the user screen creation function.

7.1 User Screen Creation Function

7.1.1 User screen creation function

The user screen creation function allows users to display a user-original monitor screen in the Web browser by creating an HTML file and registering it into the Web server module.
Describing a Mitsubishi-supplied user part (applet, SSI or CGI part) in HTML displays tag data or logging data on the user screen.
The Mitsubishi-supplied user parts are indicated below.

Part	Outline/Application	Reference Section
Applet parts	(1) By describing an applet part in HTML, it is downloaded and displayed in the described position. The display is updated automatically. Several seconds to several ten seconds are required to display it first. (2) Used to create a graphical screen. (3) Java VM is required in the client side Web browser. (*1)	Section 7.2
SSI (Server Side Include) parts	(1) By embedding a part in HTML, it is converted into a tag component name/tag component value according to the parameters when it is read by the Web browser. The display is not updated automatically. (2) Used to create a character-based screen.	Section 7.3
CGI (Common Gateway Interface) parts	(1) By linking a part to a button arranged in HTML, a tag component value is written/read when the button is clicked. The display is not updated automatically. (2) Used to create a character-based screen.	Section 7.4

*1 For how to download Java VM, refer to Section 3.1 Remarks (2) (3).

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7.1.2 Precautions for user screen creation function

This section provides precautions for the user screen creation function.
Refer to Section 7.1.3 for precautions for the user screen for cellular phone display.

(1) Precautions for describing HTML file on user screen

(a) Be sure to set the user part parameters that must be set. Failure to do so will result in an error.

(b) The file name and parameters of a user part are not case sensitive.

(c) When the contents of the user screen have been changed, delete the temporary Internet files (cache) and then retrieve the user screen using the Web browser. (Refer to Section 6.2.7 (1) for how to delete the temporary Internet files.)

(2) Precautions for sample screens

The Web server module has sample screens for each user part in the /ROM/WWW/USER/ directory.
Before starting actual operation, delete all sample screen files. (To prevent them from being written to the devices that use the sample screens.)
The sample screen can be restored by initializing the module. (Refer to Section 4.13.)

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7.2 Applets Parts

This section explains the applet parts (Java applets).
An applet parts list is given below.

Part Name	File Name	Function	Reference Section
Communication parts	WSCom.class	• Integrates the communications of all applet parts in the Web browser to make batch communication. • When using applet parts, be sure to describe only one communication part before the applet parts in HTML.	Section 7.2.1
Data block parts	WSDatblk.class	Displays in table form the components as many as the specified blocks within the specified tag data. Writing to the specified tag component is also available.	Section 7.2.2
Level display parts	WSLevel.class	Displays the percentage (%) of the component value to the whole (maximum and minimum range).	Section 7.2.3
Graphic display parts	WSPictur.class	Displays the specified graphic when the component reaches the set value.	Section 7.2.4
Comment display parts	WSCmt.class	Displays the specified comment when the component reaches the set value.	Section 7.2.5
Audio parts	WSAudio.class	Plays the specified audio file when the component reaches the set value.	Section 7.2.6
Historical graph display parts	WSHstgrp.class	Displays the logging data in a time-series line graph.	Section 7.2.7
Historical data display parts	WSHstdat.class	Displays the logging data in table form.	Section 7.2.8
Write button parts	WSWrtbtn.class	Writes the specified value to the specified tag component.	Section 7.2.9
Device monitor parts	DevMon.class	Displays a monitor screen in the same display form as in the device monitor of the standard screen. (Refer to Section 6.2.1 for the device monitor.)	Section 7.2.10
Tag data monitor parts	TagMon.class	Displays a monitor screen in the same display form as in the tag data monitor of the standard screen. (Refer to Section 6.2.2 for the tag data monitor.)	Section 7.2.11
Logging monitor parts	LogMon.class	Displays a monitor screen in the same display form as in the logging monitor of the standard screen. (Refer to Section 6.2.3 for the logging monitor.)	Section 7.2.12
Event history monitor parts	EveMon.class	Displays a monitor screen in the same display form as in the event history monitor of the standard screen. (Refer to Section 6.2.4 for the event history monitor.)	Section 7.2.13
PLC diagnostics monitor parts	DiaMon.class	Displays a monitor screen in the same display form as in the PLC diagnostics monitor of the standard screen. (Refer to Section 6.2.5 for the PLC diagnostics monitor.)	Section 7.2.14
Self-diagnostics monitor parts	UniMon.class	Displays a monitor screen in the same display form as in the self-diagnostics monitor of the standard screen. (Refer to Section 6.2.6 for the self-diagnostics monitor.)	Section 7.2.15

7.2.1 Method of Describing Applet Parts in HTML

This section explains how to describe the applet parts (Java applets) in HTML. Describe applet tags in the location within HTML, where the applet parts to be displayed, as shown below.

```
<applet code="WSCom.class" codebase="/PARTS/" width="0" height="0">
<param name="INTERVAL" value=" setting value ">
</applet>
```

· · · (1) Communication Part

```
<applet code=" file name " codebase="/PARTS/" width=" width " height=" height ">
  1)          2)              3)              4)             5)

<param name=" parameter name " value=" setting value ">
  6)             7)                    8)
   ⋮
<param name=" parameter name " value=" setting value ">
</applet>
  9)
```

· · · (2) Applet Parts

(1) Communication part

This part is designed to integrate the communications of the applet parts in the Web browser to make batch communication.
When using the applet parts, make sure to describe only one communication part before the applet parts.

(a) Specifications

Item	Description
File name	WSCom. class

(b) Parameter

Item	Description	Setting Range	Initial Value
INTERVAL	Sets the communication (data update) interval in second unit. However, if the actual communication time is longer than the set seconds, communication is made at the shortest possible interval.	1 to 100	5

(2) Applet Parts

	Item	Description
1)	applet	Indicates the start of the applet tag.
2)	code	Sets the file name (.class) for the Java applet. (Example) code="WSDatblk. class"
3)	codebase	Sets the file storage location (directory path) for the Java applet. Since the Java applet is stored under the PARTS directory, make sure to set as follows: (Refer to Appendix 3 for the directory structure.) [codebase="/PARTS/"]
4)	width	Sets the width of the Java applet in pixel unit.
5)	height	Sets the height of the Java applet in pixel unit.
6)	param	(1) Indicates the parameter lines. (2) Describes PARAM lines when setting more than one parameter. (3) The parameters not described operate at the initial values.
7)	name	Sets the parameter name. Refer to Section 7.2.2 for the parameters of the applet parts.
8)	value	Sets the parameter value.
9)	/applet	Indicates the end of the applet tag.

(3) Display colors

Set the parameter-set display colors (character color, background color, etc.) by color name or RGB value.

(a) Color name (can be set in either uppercase or lowercase)

White	Black	Red	Green
Blue	Yellow	Purple	Aqua
Maroon	Navy	Olive	Teal
Gray	Silver	Lime	Fuchsia

(b) RGB value

After #, set the RBG value represented in hexadecimal.

(Example)

#FFFFFF White

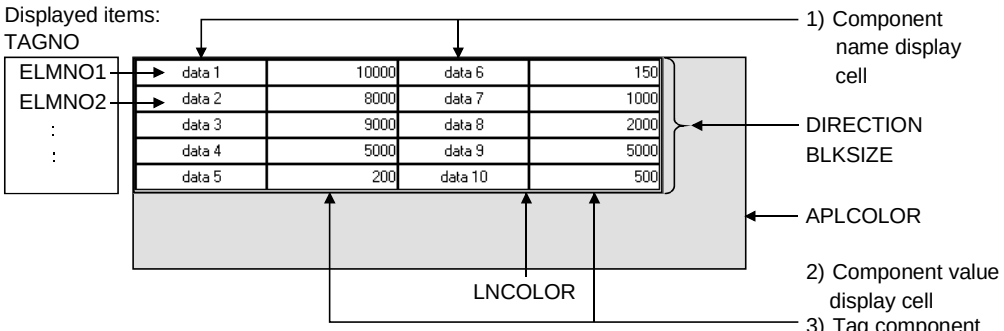
#000000 Black

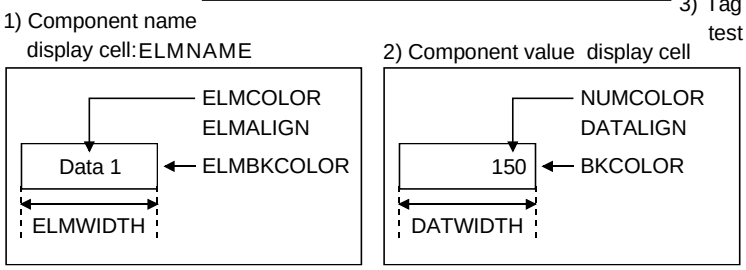
#FF0000 Red

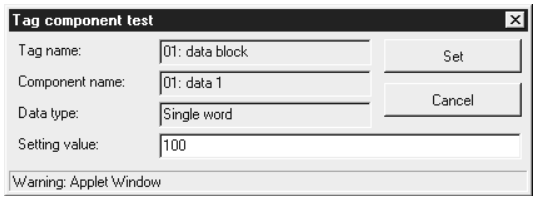
7.2.2 Data block parts

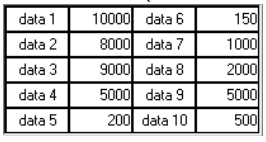
The components as many as the specified blocks within the specified tag data are displayed in table form.
Writing to the specified tag component is also available.
Only the user having the tag component write authority is allowed to write a value to a tag component with the data block part. Refer to Section 4.6.5 for the user authority.

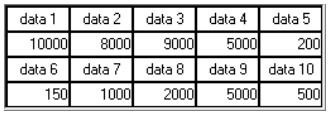
(1) Specifications

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>File name</td><td>WSDatblk. class</td></tr>
<tr><td>Number of block</td><td>Maximum 64 blocks (for the component number)</td></tr>
<tr><td>Component type that can be specified</td><td>Single word, Double word, Real number, Bit, String</td></tr>
<tr><td>Display form</td><td>




3) Tag component test dialog box : WRITE, LANGUAGE
Double-clicking the WRITE or LANGUAGE component value display cell opens the tag component test dialog box.
Refer to Section 6.2.2 (2) for the tag component test.


</td></tr>
<tr><td>Data direction</td><td>The data direction for block display can be set in the parameter (DIRECTION).
Vertical direction (DIRECTION=0)


Horizontal direction (DIRECTION=1)


</td></tr>
</table>

(2) Parameter

Item	Description	Setting Range	Initial Value
TAGNO	Sets the tag data for data block display using the tag setting No. (Refer to Section 6.3.3)	1 to 64	Must be set
ELMNO1 to ELMNO64(*1)	Sets the component for data block display using the component setting No. (Refer to Section 6.3.3)	1 to 64	Must be set
DIRECTION	Sets the display direction of the block data. 0: Vertical direction 1: Horizontal direction	0, 1	0 (Vertical direction)
BLKSIZE	Sets the block size. (1) Vertical direction (DIRECTION = 0) Sets the number of block lines. If the set number of components is greater than the number of block lines, line feed is performed by the number of block lines. (2) Horizontal direction (DIRECTION = 1) Sets the number of block columns. If the set number of components is greater than the number of block columns, line feed is performed by the number of block columns.	1 to 64	5
NUMCOLOR	Sets the character color of the component value display cell.	String	Black
BKCOLOR	Sets the background color of the component value display cell.	String	White
ELMCOLOR	Sets the character color of the component name display cell.	String	Black
ELMBKCOLOR	Sets the background color of the component name display cell.	String	White
LNCOLOR	Sets the line color.	String	Black
APLCOLOR	Sets the background color (undrawn area) of the Java applet.	String	Gray
ELMNAME	Sets whether the component name display cell will be displayed or not. 0: Not displayed 1: Displayed	0, 1	1 (Displayed)
DATWIDTH	Sets the width of the data cell.	1 to 1000	110
ELMWIDTH	In the vertical direction (DIRECTION = 0), sets the width of the component name display cell.	1 to 1000	110
DATALIGN	Sets the alignment of the component value display cell. 0: Left 1: Right 2: Centered	0 to 2	1 (Right alignment)
ELMALIGN	Sets the alignment of the component name display cell. 0: Left 1: Right 2: Centered	0 to 2	2 (Centered)
WRITE	Sets whether data can be written to a tag component or not. 0: Write disabled 1: Write enabled	0, 1	0 (Write disabled)
LANGUAGE	Selects the language of the tag component test dialog box. 0: Japanese 1: English	0, 1	1 (English)

*1 Be sure to set ELMNO1. Failure to do so will result in an error. Set ELMNO1 to ELMNO64 consecutively. Failure to do so will result in an error. (Refer to Section 7.5.)

(3) Sample screen for data block part

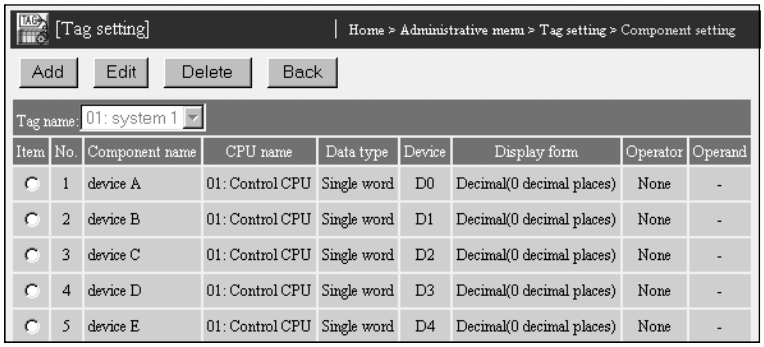
The following provides an example of creating the sample screen that displays the data block parts.

The sample screen (SMPBLKEN.HTM) is stored in the USER directory of the Web server module.

(a) Tag setting (refer to Section 6.3.3)

1) Set "Data write" in the tag setting No. 1 to "Enable".

2) Set the component setting No. 1 to 5 of the tag setting No. 1.



Item	No.	Component name	CPU name	Data type	Device	Display form	Operator	Operand
○	1	device A	01: Control CPU	Single word	D0	Decimal(0 decimal places)	None	-
○	2	device B	01: Control CPU	Single word	D1	Decimal(0 decimal places)	None	-
○	3	device C	01: Control CPU	Single word	D2	Decimal(0 decimal places)	None	-
○	4	device D	01: Control CPU	Single word	D3	Decimal(0 decimal places)	None	-
○	5	device E	01: Control CPU	Single word	D4	Decimal(0 decimal places)	None	-

3) Click on the "Update" button on the Setting update screen to update the setting.

(b) Creation of HTML file (File name: SMPBLKEN.HTM)

The HTML source is indicated below.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<meta http-equiv="Pragma" content="no-cache">
<title>Sample screen for data block part</title>
</head>
<body>
<h1>Sample screen for data block part</h1>
<!-- Communication part -->
<applet code="WSCom.class" codebase="/PARTS/" width="0" height="0">
<param name="INTERVAL" value="1">
</applet>
<!-- Data block part -->
<applet code="WSDatblk.class" codebase="/PARTS/" width="405" height="65">
<param name="TAGNO"          value="1">
<param name="ELMNO1"         value="1">
<param name="ELMNO2"         value="2">
<param name="ELMNO3"         value="3">
<param name="ELMNO4"         value="4">
<param name="ELMNO5"         value="5">
<param name="DIRECTION"      value="0">
<param name="BLKSIZE"        value="3">
<param name="NUMCOLOR"     value="Black">
<param name="BKCOLOR"      value="White">
<param name="ELMCOLOR"     value="Black">
<param name="ELMBKCOLOR"  value="White">
<param name="LNCOLOR"       value="Black">
<param name="APLCOLOR"     value="Gray">
```

```
<param name="ELMNAME"        value="1">
<param name="DATWIDTH"       value="100">
<param name="ELMWIDTH"       value="100">
<param name="DATALIGN"       value="1">
<param name="ELMALIGN"       value="2">
<param name="WRITE"          value="1">
<param name="LANGUAGE"       value="1">
</applet>
</body>
</html>
```

(c) Storage of HTML file

Transfer the HTML file to the Web server module by performing FTP operation.

File storage destination: [/ROM/WWW/USER/SMPBLKEN.HTM]

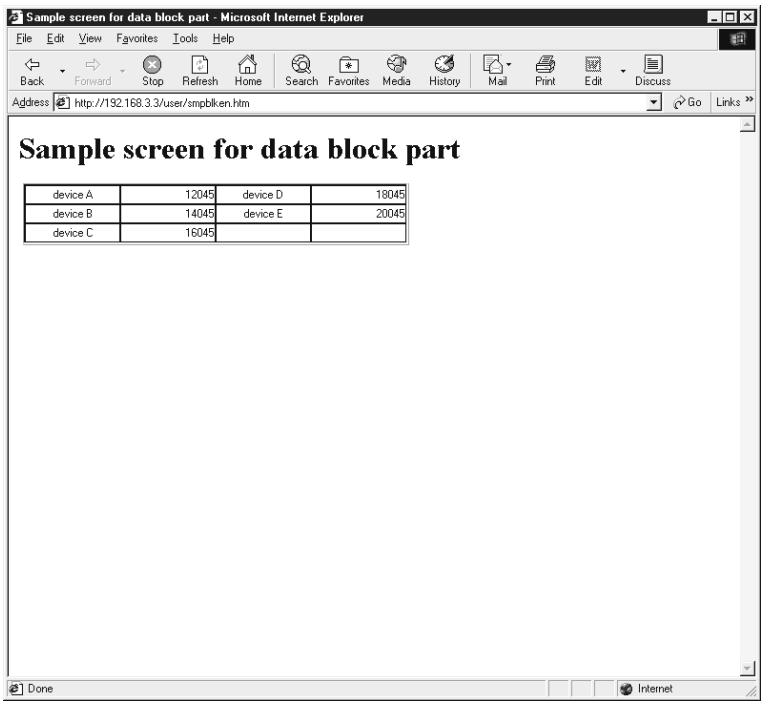
(d) Sample screen display

Display the sample screen.

(Example) When accessing the Web server module by one-to-one connection

Sample screen address:

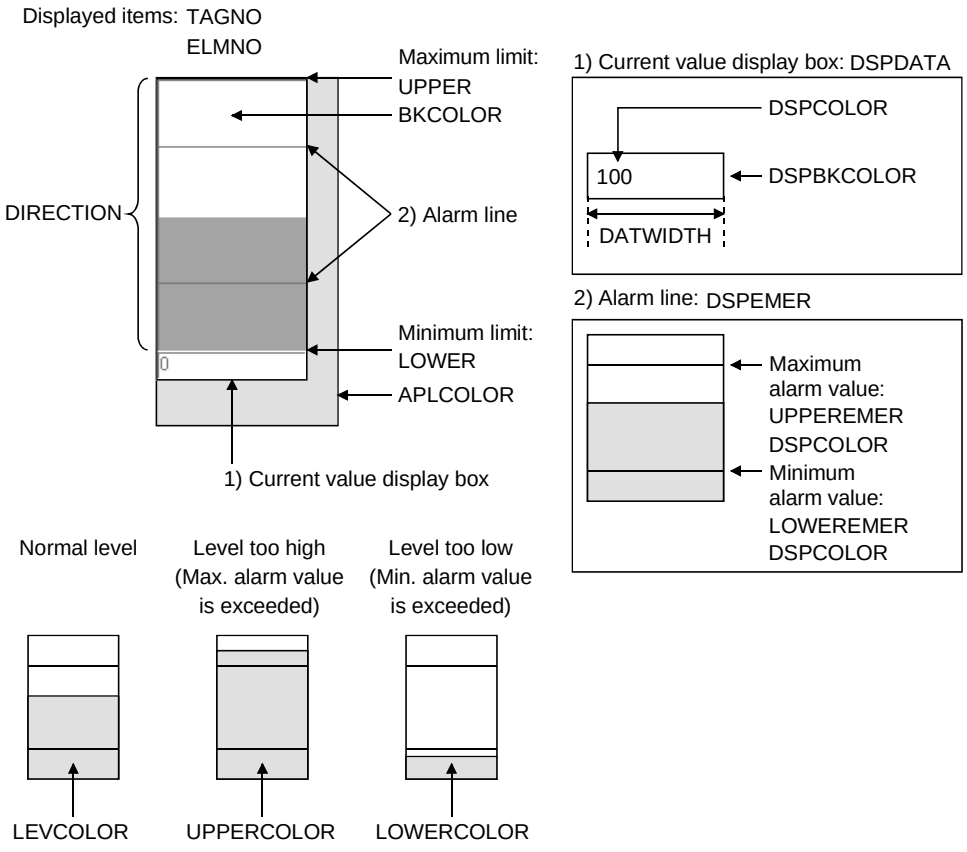
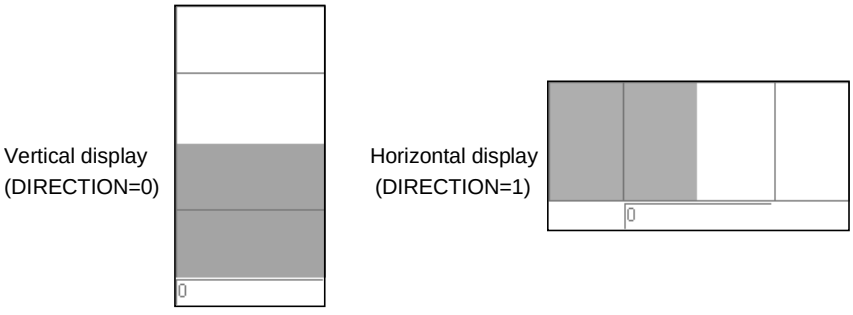
[http: //192.168.3.3/USER/SMPBLKEN.HTM]


Sample screen for data block part - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History Mail Print Edit Discuss
Address http://192.168.3.3/user/smpblken.htm
Go Links
Sample screen for data block part
device A 12045 device D 18045
device B 14045 device E 20045
device C 16045
Done
Internet

7.2.3 Level display parts

The percentage (%) of the specified component value to the whole (maximum and minimum range) is displayed.

(1) Specifications

Item	Description
File name	WSLevel. class
Display shape	Rectangular display
Component type that can be specified	Single word, Double word, Real number (An error occurs when Bit or String is specified.)
Display form	
Display pattern	Vertical display/horizontal display can be set in the parameter (DIRECTION). 

(2) Parameter

Item	Description	Setting Range	Initial Value
TAGNO	Sets the tag data for level display using the setting No. (Refer to Section 6.3.3)	1 to 64	Must be set
ELMNO	Sets the component for level display using the component setting No. (Refer to Section 6.3.3)	1 to 64	Must be set
DIRECTION	Sets the display direction of the level. 0: Vertical display 1: Horizontal display	0, 1	0 (Vertical display)
LEVCOLOR	Sets the filling color of the level display.	String	Blue
UPPERCOLOR	Sets the filling color in the case where the maximum alarm value is exceeded.	String	Red
LOWERCOLOR	Sets the filling color in the case where the minimum alarm value is exceeded.	String	Red
BKCOLOR	Sets the background color of the level display.	String	White
UPPER	Sets the maximum limit value.	-2147483648 to 2147483647	32767
LOWER	Sets the minimum limit value.		-32768
UPPEREMER	Sets the maximum alarm value.		32767
LOWEREMER	Sets the minimum alarm value.		-32768
DSPEMER	Sets whether the alarm line will be displayed or not. 0: Not displayed 1: Displayed	0, 1	0 (Not displayed)
DSPDATA	Sets whether the current value display box will be displayed or not. 0: Not displayed 1: Displayed	0, 1	0 (Not displayed)
DATWIDTH	Sets the width of the current value display box.	1 to 1000	50
DSPCOLOR	Sets the display color of the alarm lines and current value.	String	Black
DSPBKCOLOR	Sets the background color of the current value display box.	String	White
APLCOLOR	Sets the background color (undrawn area) of the Java applet.	String	Gray

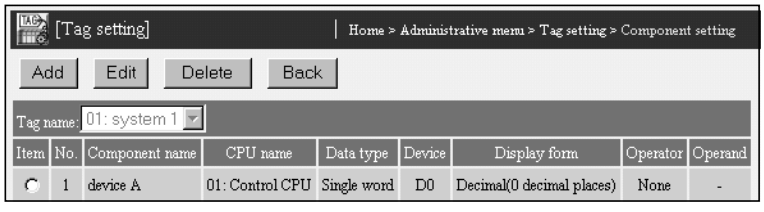
(3) Sample screen for level display part

The following provides an example of creating the sample screen that displays the level display parts.

The sample screen (SMPLVLEN.HTM) is stored in the USER directory of the Web server module.

(a) Tag setting (refer to Section 6.3.3)

1) Set the component setting No. 1 of the tag setting No. 1.



2) Click on the "Update" button on the Setting update screen to update the setting.

(b) Creation of HTML file (File name: SMPLVLEN.HTM)
The HTML source is indicated below.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<meta http-equiv="Pragma" content="no-cache">
<title>Sample screen for level display part</title>
</head>
<body>
<h1>Sample screen for level display part</h1>
<!-- Communication part -->
<applet code="WSCom.class" codebase="/PARTS/" width="0" height="0">
<param name="INTERVAL" value="1">
</applet>
<!-- Level display part -->
<applet code="WSLevel.class" codebase="/PARTS/" width="100" height="200">
<param name="TAGNO"          value="1">
<param name="ELMNO"          value="1">
<param name="DIRECTION"      value="0">
<param name="LEVCOLOR"       value="Blue">
<param name="UPPERCOLOR"     value="Red">
<param name="LOWERCOLOR"     value="Red">
<param name="BKCOLOR"        value="White">
<param name="UPPER"          value="32767">
<param name="LOWER"          value="-32768">
<param name="UPPEREMER"      value="20000">
<param name="LOWEREMER"      value="-20000">
<param name="DSPEMER"        value="1">
<param name="DSPDATA"        value="1">
<param name="DATWIDTH"       value="100">
<param name="DSPCOLOR"       value="Black">
<param name="DSPBKCOLOR"     value="White">
<param name="APLCOLOR"       value="Gray">
</applet>
</body>
</html>
```

(c) Storage of HTML file
Transfer the HTML file to the Web server module by performing FTP operation.
File storage destination: [/ROM/WWW/USER/SMPLVLEN.HTM]

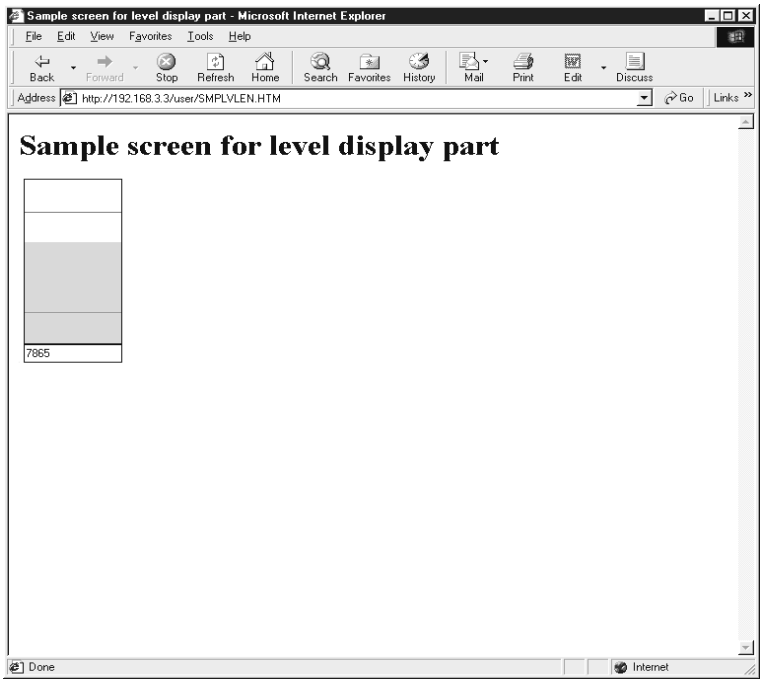
(d) Sample screen display

Display the sample screen.

(Example) When accessing the Web server module by one-to-one connection

Sample screen address:

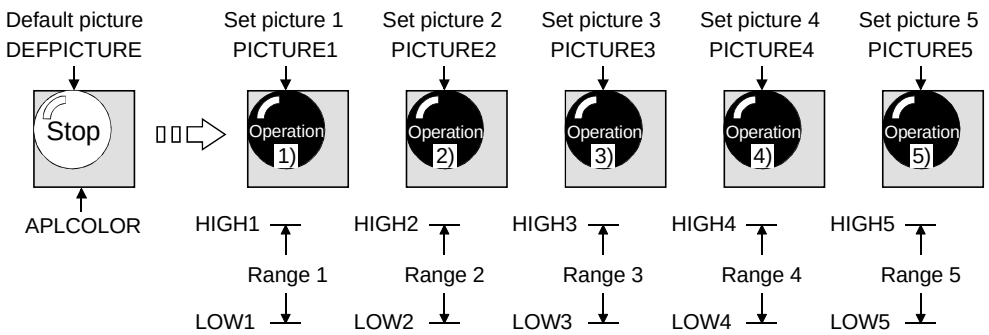
[http://192.168.3.3/USER/SMPLVLEN.HTM]


Sample screen for level display part - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss
Address http://192.168.3.3/user/SMPLVLEN.HTM
Go Links
Sample screen for level display part
7865
Done
Internet

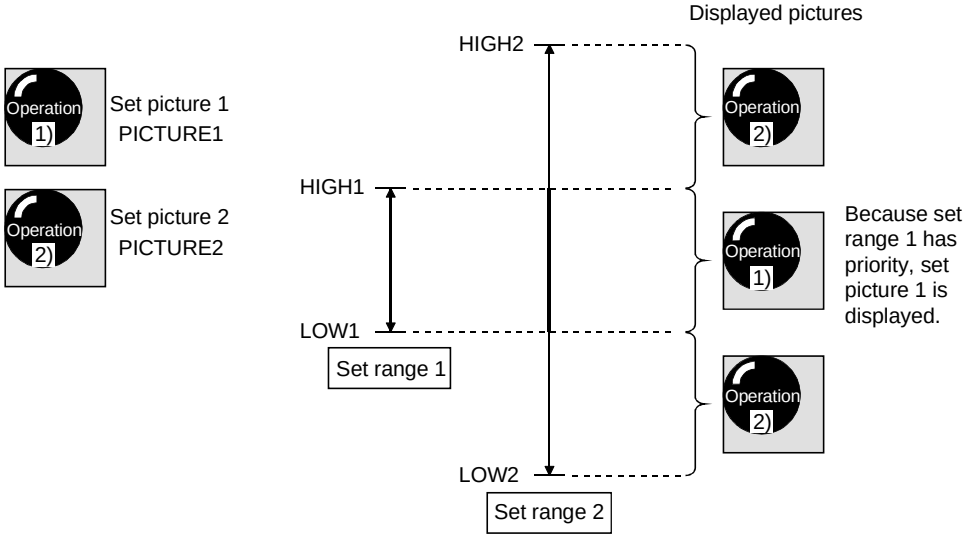
7.2.4 Graphic display parts

The specified graphic is displayed when the component reaches the set value.

(1) Specifications

Item	Description
File name	WSPictur. class
Display file form	JPEG, GIF
Component type that can be specified	Single word, Double word, Real number, Bit (An error occurs when String is specified.)
Device setting value (range) quantity	Up to 5 graphics may be registered.
Display form ＊1	Displayed items: TAGNO ELMNO No. of setting ranges: RANGENO  ・When the component value falls within the setting range, set picture is displayed. ・When the component value is out of the setting range, default picture is displayed.

＊1 If the setting ranges overlap, the graphic having the setting range of the lower number is displayed.



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(2) Parameter

Item		Description	Setting Range	Initial Value
TAGNO		Sets the tag data for graphic display using the tag setting No. (Refer to Section 6.3.3)	1 to 64	Must be set
ELMNO		Sets the component for graphic display using the component setting No. (Refer to Section 6.3.3)	1 to 64	Must be set
DEFPICTURE		Sets the default graphic file (.JPG, .GIF). Displayed when the component value is outside the setting range. It is required for users to prepare the graphic to be set.	String (.JPG, .GIF)	File not set (Not displayed)
RANGENO (*1)		Sets the quantity in the setting range.	1 to 5	Must be set
Setting range 1	LOW1	Sets the minimum limit of the setting range 1.	-2147483648 to 2147483647	Must be set
	HIGH1	Sets the maximum limit of the setting range 1.		Must be set
	PICTURE1	Sets the display graphic file (.JPG, .GIF) in the setting range 1. Displayed when the component value is in the setting range 1. It is required for uses to prepare the graphic to be set.	String (.JPG, .GIF)	Must be set
Setting range 2	LOW2, HIGH2, PICTURE2	Set the setting range 2. (The setting is the same as the setting range 1)		
Setting range 3	LOW3, HIGH3, PICTURE3	Set the setting range 3. (The setting is the same as the setting range 1)		
Setting range 4	LOW4, HIGH4, PICTURE4	Set the setting range 4. (The setting is the same as the setting range 1)		
Setting range 5	LOW5, HIGH5, PICTURE5	Set the setting range 5. (The setting is the same as the setting range 1)		
APLCOLOR		Set the background color (undrawn area) of the Java applet.	String	Gray

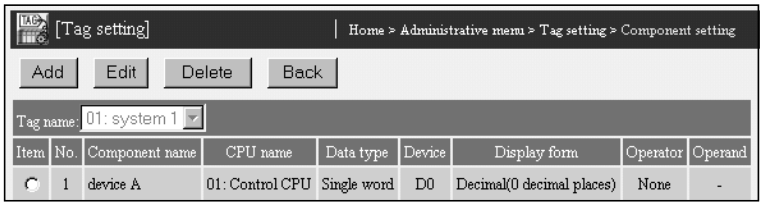
*1 Be sure to set LOWs, HIGHs and PICTUREs as many as the quantity specified at RANGENO.
Failure to do so will result in an error. (Refer to Section 7.5.)

(3) Sample screen for graphic display part

The following provides an example of creating the sample screen that displays the graphic display parts.
The sample screen (SMPPICEN.HTM) is stored in the USER directory of the Web server module.

(a) Tag setting (refer to Section 6.3.3)

1) Set the component setting No. 1 of the tag setting No. 1.



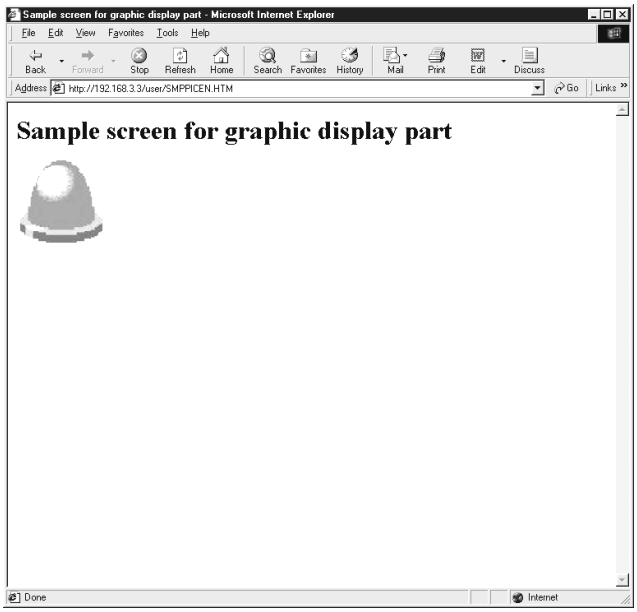
2) Click on the "Update" button on the Setting update screen to update the setting.

(b) Creation of HTML file (File name: SMPPICEN.HTM)
The HTML source is indicated below.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<meta http-equiv="Pragma" content="no-cache">
<title>Sample screen for graphic display part</title>
</head>
<body>
<h1>Sample screen for graphic display part</h1>
<!-- Communication part -->
<applet code="WSCom.class" codebase="/PARTS/" width="0" height="0">
<param name="INTERVAL" value="1">
</applet>
<!-- Graphic display part -->
<applet code="WSPictur.class" codebase="/PARTS/" width="100" height="100">
<param name="TAGNO"          value="1">
<param name="ELMNO"          value="1">
<param name="DEFPICTURE"  value="GREEN.JPG">
<param name="RANGENO"     value="1">
<param name="LOW1"           value="-32768">
<param name="HIGH1"          value="0">
<param name="PICTURE1"     value="RED.JPG">
<param name="APLCOLOR"      value="Gray">
</applet>
</body>
</html>
```

(c) Storage of HTML file
Transfer the HTML file to the Web server module by performing FTP operation.
File storage destination: [/ROM/WWW/USER/SMPPICEN.HTM]

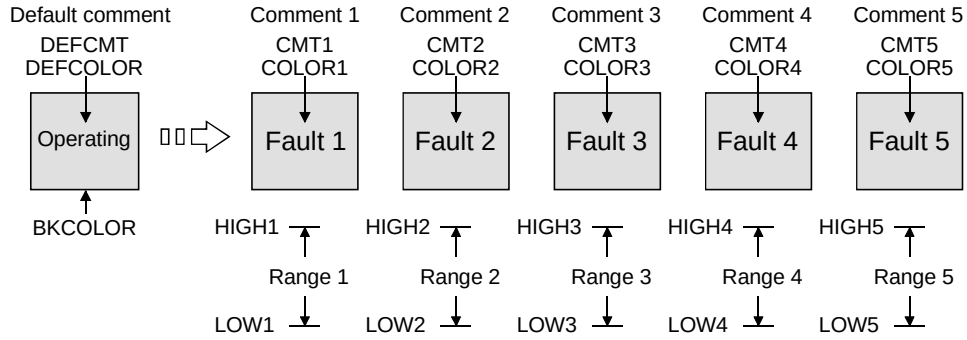
(d) Sample screen display
Display the sample screen.
(Example) When accessing the Web server module by one-to-one connection
Sample screen address:
[http://192.168.3.3/USER/SMPPICEN.HTM]


Sample screen for graphic display part - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss
Address http://192.168.3.3/user/SMPPICEN.HTM
Go Links
Sample screen for graphic display part
Done
Internet

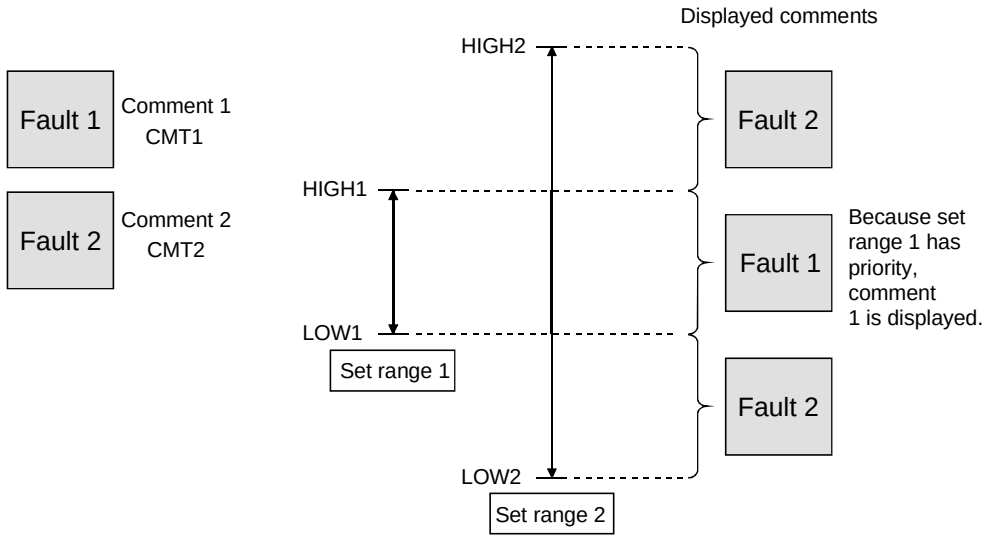
7.2.5 Comment display parts

The specified comment is displayed when the component reaches the set value.

(1) Specifications

Item	Description
File name	WSCmt.class
Number of display comment characters	Up to 32 characters
Component type that can be specified	Single word, Double word, Real number (An error occurs when String is specified.)
Device setting value (range) quantity	Up to 5 graphics may be registered.
Display form (*1)	Displayed items: TAGNO Font size: FONTSIZE ELMNO No. of setting ranges: RANGENO  ・When the component value falls within the setting range, set comment is displayed. ・When the component value is out of the setting range, a comment is displayed.

*1 If the setting ranges overlap, the graphic having the setting range of the lower number is displayed.



(2) Parameter

Item		Description	Setting Range	Initial Value
TAGNO		Sets the tag data for comment display using the tag setting No. (Refer to Section 6.3.3)	1 to 64	Must be set
ELMNO		Sets the component for comment display using the component setting No. (Refer to Section 6.3.3)	1 to 64	Must be set
FONTSIZE		Specifies the character size.	8 to 72	20
DEFCMT		Sets the default comment. Displayed when the component value is outside the setting range. Refer to Appendix 4 (5) for the applicable characters.	String	Comment not set (Not displayed)
DEFCOLOR		Sets the display color of the default comment.	String	Black
BKCOLOR		Sets the background color.	String	White
RANGENO (*1)		Sets the quantity in the setting range.	1 to 5	Must be set
Setting range 1	LOW1	Sets the minimum limit of the setting range 1.	-2147483648 to 2147483647	Must be set
	HIGH1	Sets the maximum limit of the setting range 1.		Must be set
	CMT1	Sets the comment in the setting range 1. Displayed when the component value is in the setting range 1. Refer to Appendix 4 (5) for the applicable characters.	String	Must be set
	COLOR1	Sets the display color of the comment in the setting range 1.	String	Red
Setting range 2	LOW2, HIGH2, CMT2, COLOR2	Sets the setting range 2. (The setting is the same as the setting range 1)		
Setting range 3	LOW3, HIGH3, CMT3, COLOR3	Sets the setting range 3. (The setting is the same as the setting range 1)		
Setting range 4	LOW4, HIGH4, CMT4, COLOR4	Sets the setting range 4. (The setting is the same as the setting range 1)		
Setting range 5	LOW5, HIGH5, CMT5, COLOR5	Sets the setting range 5. (The setting is the same as the setting range 1)		

*1 Be sure to set LOWs, HIGHs and CMTs as many as the quantity specified at RANGENO. Failure to do so will result in an error. (Refer to Section 7.5.)

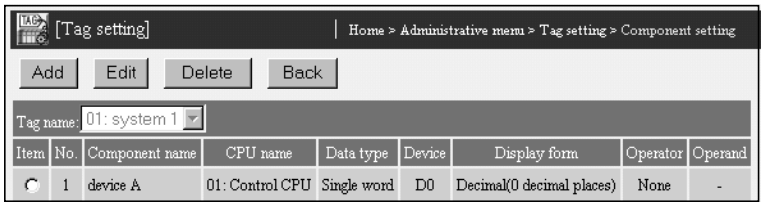
(3) Sample screen for comment display part

The following provides an example of creating the sample screen that displays the comment display parts.

The sample screen (SMPCMTEN.HTM) is stored in the USER directory of the Web server module.

(a) Tag setting (refer to Section 6.3.3)

1) Set the component setting No. 1 of the tag setting No. 1.



2) Click on the "Update" button on the Setting update screen to update the setting.

(b) Creation of HTML file (File name: SMPCMTEN.HTM)
The HTML source is indicated below.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<meta http-equiv="Pragma" content="no-cache">
<title>Sample screen for comment display part</title>
</head>
<body>
<h1>Sample screen for comment display part</h1>
<!-- Communication part -->
<applet code="WSCom.class" codebase="/PARTS/" width="0" height="0">
<param name="INTERVAL" value="1">
</applet>
<!-- Comment display part -->
<applet code="WSCmt.class" codebase="/PARTS/" width="500" height="50">
<param name="TAGNO"       value="1">
<param name="ELMNO"       value="1">
<param name="FONTSIZE"    value="30">
<param name="DEFCMT"      value="Ready ...">
<param name="DEFCOLOR"    value="Black">
<param name="BKCOLOR"     value="White">
<param name="RANGENO"     value="1">
<param name="LOW1"        value="-32768">
<param name="HIGH1"       value="0">
<param name="CMT1"        value="A trouble occurs in device A.">
<param name="COLOR1"      value="Red">
</applet>
</body>
</html>
```

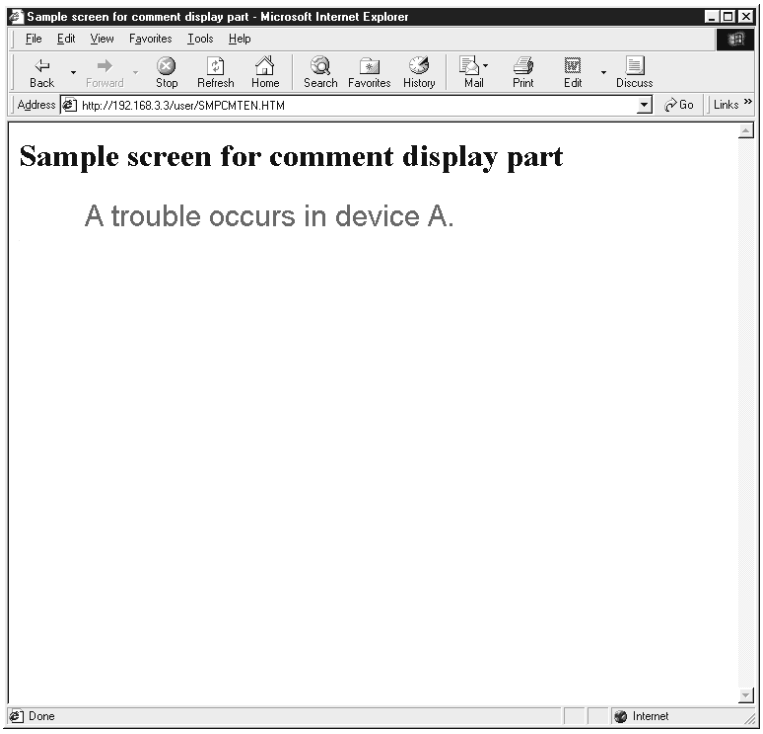
(c) Storage of HTML file
Transfer the HTML file to the Web server module by performing FTP operation.
File storage destination: [/ROM/WWW/USER/SMPCMTEN.HTM]

(d) Sample screen display

(Example) When accessing the Web server module by one-to-one connection

Sample screen address:

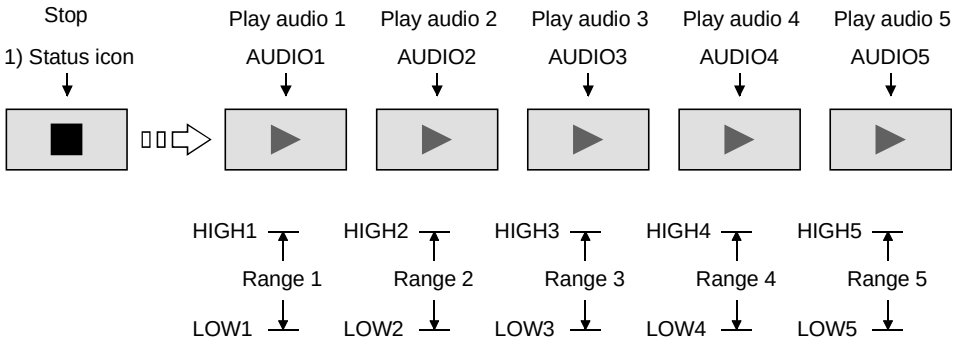
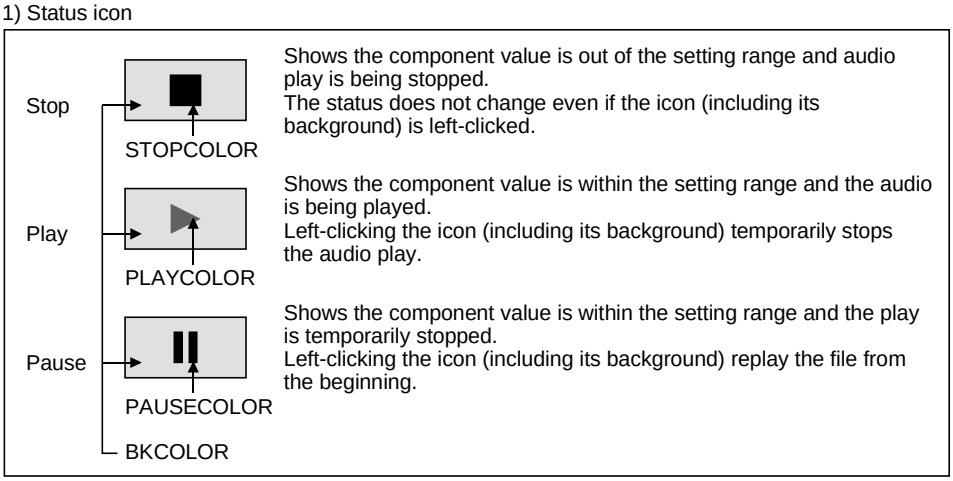
[http://192.168.3.3/USER/SMPCMTEN.HTM]


Sample screen for comment display part - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss
Address http://192.168.3.3/user/SMPCMTEN.HTM
Go Links
Sample screen for comment display part
A trouble occurs in device A.
Done
Internet

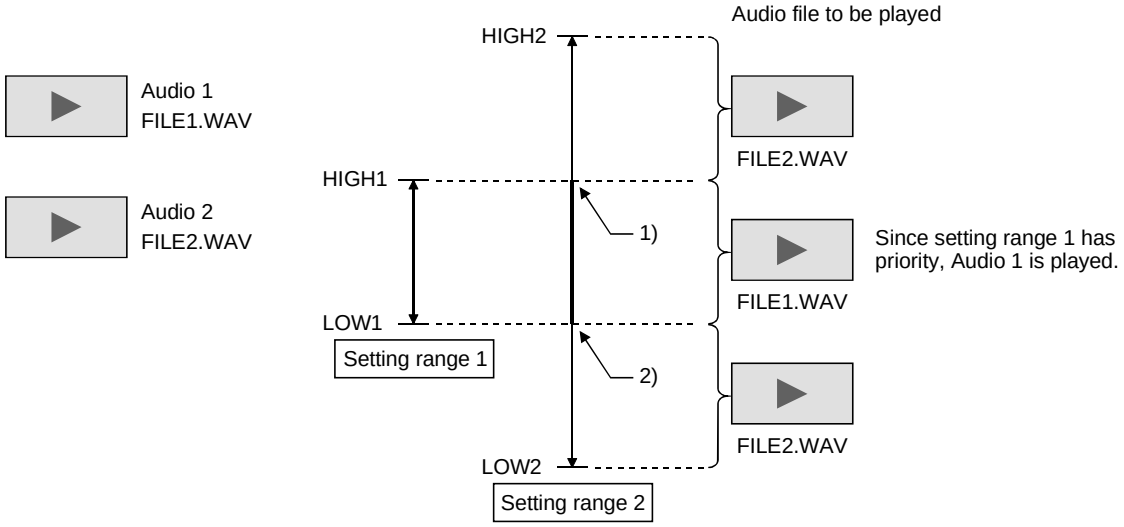
7.2.6 Audio parts

Plays the specified audio file when the component reaches the set value.

(1) Specifications

Item	Description
File name	WSAudio. class
Play file form	WAV, AU
Component type that can be specified	Single word, Double word, Real number, Bit (An error occurs when String is specified.)
Device setting value (range) quantity	Up to 5 values may be registered.
Play form (∗1)	Displayed items: TAGNO ELMNO No. of setting ranges :RANGENO  1) Status icon 

∗1 If any setting ranges are overlapped, the audio file with the smaller number is played. (For parameter PLAYMODE=0 (Stop))



1) When the value enters the Audio 1 setting range during play of Audio 2, the Audio 2 play is stopped and Audio 1 is played.
2) When the value goes out of the Audio 1 setting range (within the Audio 2 setting range), replay Audio 2 from the beginning.

(2) Parameter

Item		Description	Setting Range	Initial Value
TAGNO		Sets the tag data for playing audio files using the tag setting No. (Refer to Section 6.3.3.)	1 to 64	Must be set
ELMNO		Sets the component for playing audio files using the component setting No. (Refer to Section 6.3.3.)	1 to 64	Must be set
RANGENO (∗1)		Sets the quantity in the setting range.	1 to 5	Must be set
Setting range 1	LOW1	Sets the minimum limit of the setting range 1.	-2147483648 to 2147483647	Must be set
	HIGH1	Sets the maximum limit of the setting range 1.		Must be set
	AUDIO1 (∗2)	Sets the audio file (.WAV, .AU) of setting range 1. When the component value is within setting range 1, the audio file is played. The audio file shall be prepared by the user.	String (.WAV, .AU)	Must be set
	REPEAT1 (∗3)(∗4)	Sets whether the play of the audio file is to be repeated or not. 0: Not repeat 1: Repeat	0, 1	1 (Repeat)
	PLAYMODEL1 (∗4)	Sets the operation to be performed when the component value exceeds the setting range during audio file play. 0: Stop 1: Continue	0, 1	0 (Stop)

Item		Description	Setting Range	Initial Value
Setting range 2	LOW2, HIGH2, AUDIO2, REPEAT2, PLAYMODE2	Set the setting range 2. (The setting is the same as the setting range 1)		
Setting range 3	LOW3, HIGH3, AUDIO3, REPEAT3, PLAYMODE3	Set the setting range 3. (The setting is the same as the setting range 1)		
Setting range 4	LOW4, HIGH4, AUDIO4, REPEAT4, PLAYMODE4	Set the setting range 4. (The setting is the same as the setting range 1)		
Setting range 5	LOW5, HIGH5, AUDIO5, REPEAT5, PLAYMODE5	Set the setting range 5. (The setting is the same as the setting range 1)		
STOPCOLOR		Set the color of the icon indicating the stop status.	String	Black
PLAYCOLOR		Set the color of the icon indicating the play status.	String	Red
PAUSECOLOR		Set the color of the icon indicating the pause status.	String	Black
BKCOLOR		Set the background color of the icon.	String	Gray
LNCOLOR		Set the border color of the icon.	String	Black

∗1 Be sure to set the values of LOW, HIGH and AUDIO for the same quantity specified in RANGENO. Otherwise, an error occurs. (Refer to Section 7.5.)

∗2 When using Microsoft® VM, AU files only can be set.
If a WAV file is specified, an audio file format error (0B08h) occurs.

∗3 When using Microsoft® VM, setting is not allowed.
It operates as REPEAT=1 (Repeat).
Even if setting has been made, it will be ignored.

∗4 In the REPEAT and PLAYMODE settings, select any of the following operations.
When an event occurs:

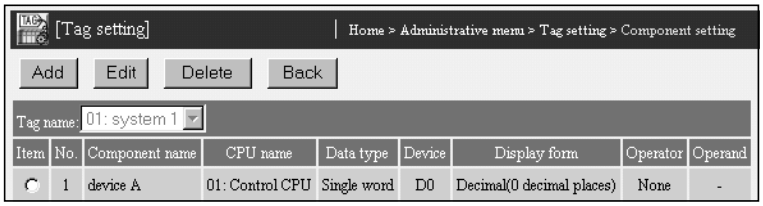
1) Playing the audio file once while the component value is within the setting range
REPEAT=0 (Not repeat), PLAYMODE=0 (Stop)
2) Playing the audio file repeatedly while the component value is within the setting range
REPEAT=1 (Repeat), PLAYMODE=0 (Stop)
3) Playing the audio file when the component value falls within the setting range and completing the playing to the end even if the value gets out of the range.
REPEAT=0 (Not repeat), PLAYMODE=1 (Continue)
4) Playing the audio file repeatedly and continuously when the component value falls within the setting range.
REPEAT=1 (Repeat), PLAYMODE=1 (Continue)

(3) Sample screen for audio parts

The following provides an example of creating the sample screen that displays the audio parts.
The sample screen (SMPAUDEN.HTM) is stored in the USER directory of the Web server module.

(a) Tag setting (refer to Section 6.3.3)

1) Set the component setting No. 1 of the tag setting No. 1.



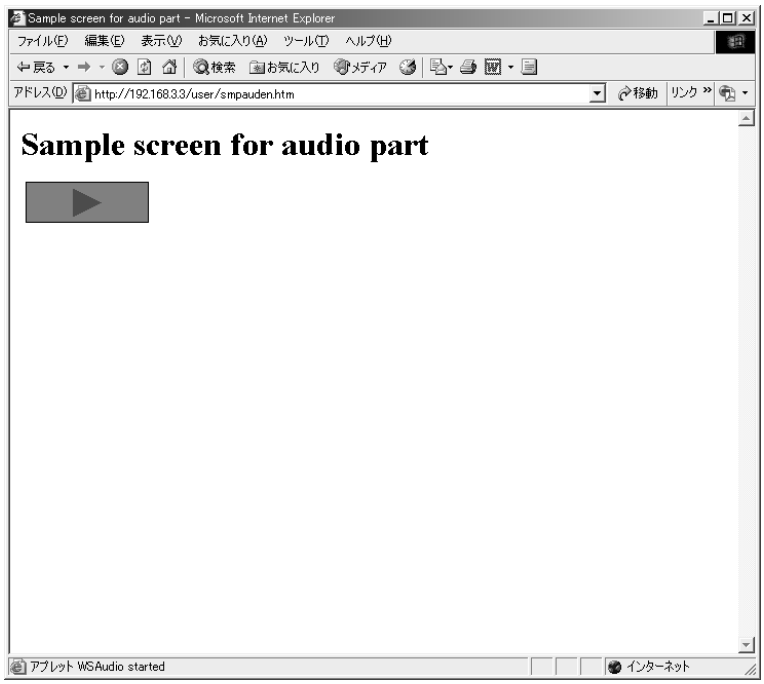
2) Click on the "Update" button on the Setting update screen to update the setting.

(b) Creation of HTML file (File name: SMPAUDEN.HTM)
The HTML source is indicated below.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
    <meta http-equiv="Pragma" content="no-cache">
    <title>
      Sample screen for audio part
    </title>
  </head>
  <body>
    <h1>
      Sample screen for audio part
    </h1><!-- Communication part -->
    <applet code="WSCom.class" codebase="/PARTS/" width="0" height="0">
      <param name="INTERVAL" value="1">
    </applet> <!-- Audio part -->
    <applet code="WSAudio.class" codebase="/PARTS/" width="120" height="40">
      <param name="TAGNO" value="1">
      <param name="ELMNO" value="1">
      <param name="RANGENO" value="1">
      <param name="LOW1" value="-32768">
      <param name="HIGH1" value="0">
      <param name="AUDIO1" value="ALARM.AU">
      <param name="REPEAT1" value="1">
      <param name="PLAYMODE1" value="0">
      <param name="STOPCOLOR" value="Black">
      <param name="PLAYCOLOR" value="Red">
      <param name="PAUSECOLOR" value="Black">
      <param name="BKCOLOR" value="Gray">
      <param name="LNCOLOR" value="Black">
    </applet>
  </body>
</html>
```

(c) Storage of HTML file
Transfer the HTML file to the Web server module by performing FTP operation.
File storage destination: [/ROM/WWW/USER/SMPAUDEN.HTM]

(d) Sample screen display
Display the sample screen.
(Example) When accessing the Web server module by one-to-one connection
Sample screen address:
[http://192.168.3.3/USER/SMPAUDEN.HTM]


Sample screen for audio part - Microsoft Internet Explorer
ファイル(F) 編集(E) 表示(V) お気に入り(A) ツール(T) ヘルプ(H)
戻る 検索 お気に入り メディア
アドレス(D) http://192.168.3.3/user/smpauden.htm
移動 リンク
Sample screen for audio part
アプレット WSAudio started
インターネット

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(4) Precaution for using the audio parts

(a) Applet size

The icons are displayed in the entire applet area.

1) When displaying the status icons

Specify values larger than the following for the applet size.
width=20, height=20

Note that, when the width is less than 200, a space for error code display may not be sufficient in the event of an error.
If this occurs, increase the applet size.

2) When not displaying the status icons

Specify the following values for the applet size.
width=0, height=0

Note that the functions shown below are not available in this case.

- Instruction of play/pause by mouse
- Error code display in the event of an error

(b) Restrictions on use of Microsoft© VM

1) AU files only can be specified as audio files.
If a WAV file is specified, an audio file format error (0B08h) occurs.

2) The parameter, REPEAT cannot be specified.
It operates as REPEAT=1 (Repeat).
Even if setting has been made, it will be ignored.

3) Specifying the same audio file name in multiple audio parts is not allowed.
If this happens, a same file specification error (0B09h) will occur.

4) When the computer does not have any audio playback hardware, or when the audio file is corrupted, no error can be detected. (No error occurs.)

(c) Audio file encoding method

Only the audio files encoded in the PCM format can be played.
This module does not support the compression technology such as ADPCM.

(d) Audio file size

Audio files of 1MB or less only can be played.
If an audio file which size exceeds 1MB is specified, an audio file format error (0B08h) will occur.

(e) Number of audio files

When using multiple audio parts, up to 32 audio files can be specified. (∗1)
If more than 32 audio files have been specified, an audio file format error (0B08h) will occur. (∗2)

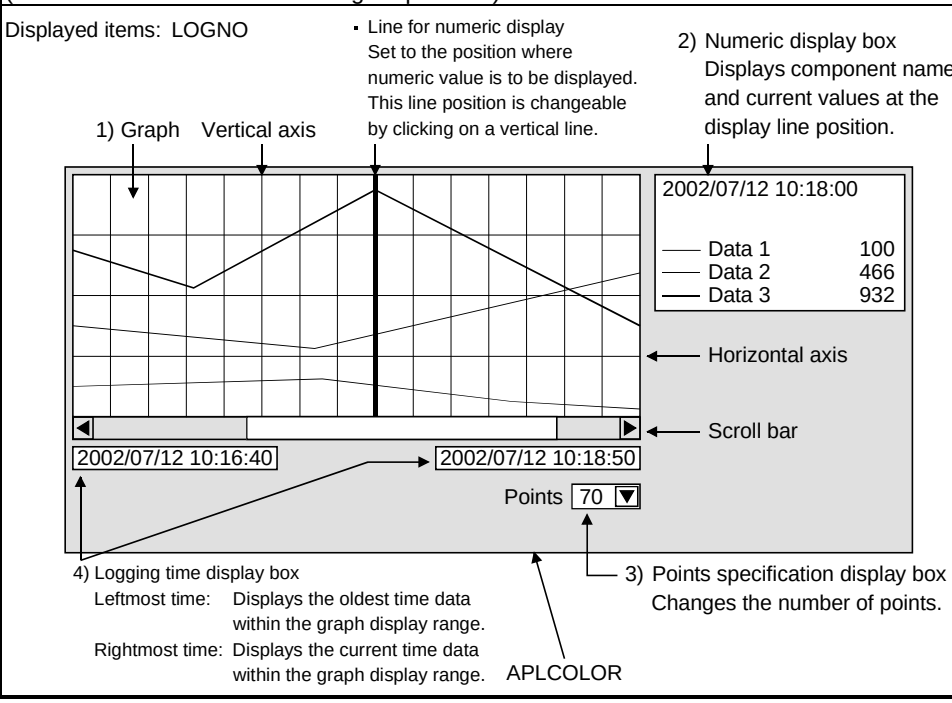
∗1 When more than one Web browser has been activated, the total number of all audio files is limited to the maximum of 32.

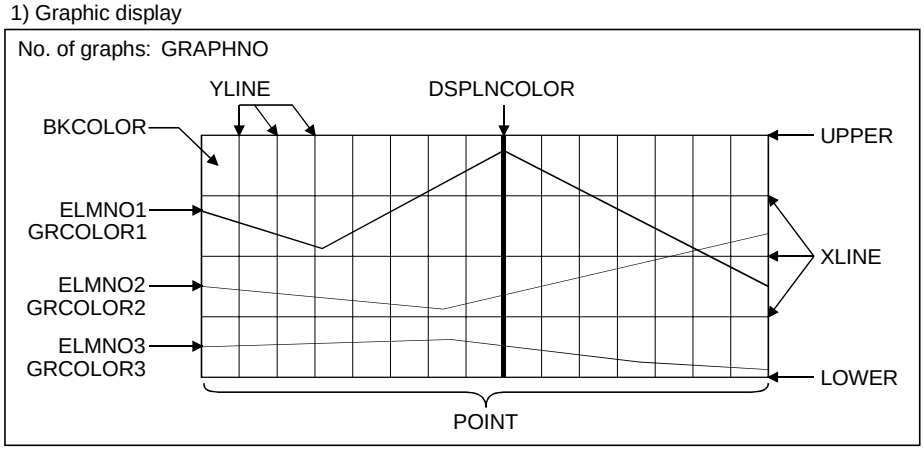
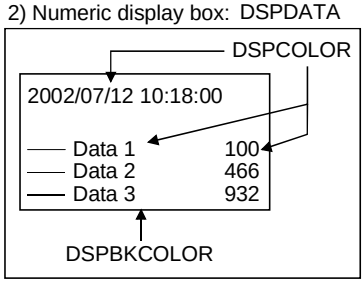
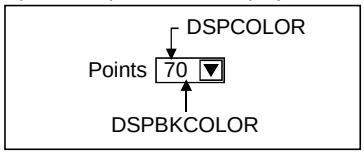
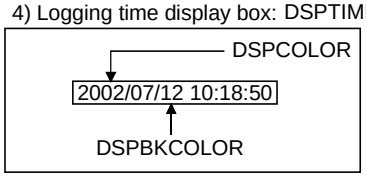
∗2 No error may occur when using Microsoft© VM, however, it may not function properly.

7.2.7 Historical graph display parts

The logging data are displayed in a time-series line graph.
Up to 100 pieces of logging data can be displayed.
The latest logged data is displayed at the right end.
At the rightmost end of the graph, new data is automatically added every time logging is performed. (Old data is erased.)

(1) Specifications

Item	Description
File name	WSHstgrp.class
Number of graph lines	Up to 5 graph lines
Component type that can be specified	Single word, Double word, Real number (An error occurs when Bit or String is specified.)
Display form	Displayed items: LOGNO 

Item	Description
Display form (continue)	1) Graphic display  2) Numeric display box: DSPDATA  3) Points specification display box: DSPBOX  4) Logging time display box: DSPTIME 

(2) Parameter

Item	Description	Setting Range	Initial Value
LOGNO	Sets the logging data for historical graph display using the logging setting No. (Refer to Section 6.4.4)	1 to 64	Must be set
GRAPHNO(*1)	Sets the number of graph lines.	1 to 5	Must be set
ELMNO1 to ELMNO5	Sets the component for historical graph display using the component setting No. (Refer to Section 6.3.3)	1 to 64	Must be set
GRCOLOR1	Sets the display color of the first graph.	String	Blue
GRCOLOR2	Sets the display color of the second graph.	String	Red
GRCOLOR3	Sets the display color of the third graph.	String	Green
GRCOLOR4	Sets the display color of the fourth graph.	String	Aqua
GRCOLOR5	Sets the display color of the fifth graph.	String	Maroon
BKCOLOR	Sets the background color of the graph display.	String	White

Item	Description	Setting Range	Initial Value
DSPCOLOR	Sets the character color of the numeric value and time.	String	Black
DSPBKCOLOR	Sets the background color of the numeric value and time.	String	White
DSPLNCOLOR	Sets the display line color.	String	Red
APLCOLOR	Sets the background color (undrawn area) of the Java applet.	String	Gray
POINT	Sets the number of logging data (records) to be displayed.	5 to 100	100
UPPER	Sets the maximum limit value.	-2147483648 to 2147483647	32767
LOWER	Sets the minimum limit value.		-32768
YLINE	Sets the number of logging data for the interval in which the vertical axis lines to be drawn.	0 to 99	0 (Without vertical axis line)
XLINE	Sets the number of horizontal axis lines.	0 to 99	0
DSPTIME	Sets whether the logging time display box will be displayed or not. 0: Not displayed 1: Displayed	0, 1	0 (Not displayed)
DSPDATA	Sets whether the numeric display box will be displayed or not. 0: Not displayed 1: Displayed When "0: Not displayed" is set, the display lines are not displayed.	0, 1	0 (Not displayed)
DSPBOX	Sets whether the points specification display box will be displayed or not. 0: Not displayed 1: Displayed	0, 1	0 (Not displayed)

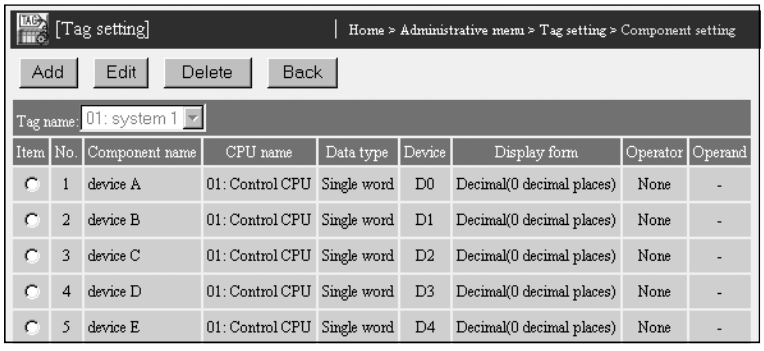
*1 Be sure to set ELMNOs as many as the graph lines specified at GRAPHNO.
Failure to do so will result in an error. (Refer to Section 7.5.)

(3) Sample screen for historical graph display part

The following provides an example of creating the sample screen that displays the historical graph display parts.
The sample screen (SMPHSGEN.HTM) is stored in the USER directory of the Web server module.

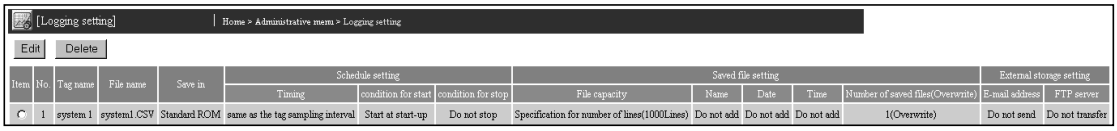
(a) Tag setting (refer to Section 6.3.3), logging setting (refer to Section 6.4.4)

1) Set the component setting No. 1 to 5 of the tag setting No. 1.



Item	No.	Component name	CPU name	Data type	Device	Display form	Operator	Operand
○	1	device A	01: Control CPU	Single word	D0	Decimal(0 decimal places)	None	-
○	2	device B	01: Control CPU	Single word	D1	Decimal(0 decimal places)	None	-
○	3	device C	01: Control CPU	Single word	D2	Decimal(0 decimal places)	None	-
○	4	device D	01: Control CPU	Single word	D3	Decimal(0 decimal places)	None	-
○	5	device E	01: Control CPU	Single word	D4	Decimal(0 decimal places)	None	-

2) Set the logging setting No. 1.



Item	No.	Tag name	File name	Save in	Schedule setting			Saved file setting					External storage setting	
					Timing	condition for start	condition for stop	File capacity	Name	Date	Time	Number of saved files(Overwrite)	E-mail address	FTP server
○	1	system 1	system1.CSV	Standard ROM	same as the tag sampling interval	Start at start-up	Do not stop	Specification for number of lines(1000Lines)	Do not add	Do not add	Do not add	1(Overwrite)	Do not send	Do not transfer

3) Click on the "Update" button on the Setting update screen to update the setting.

(b) Creation of HTML file (File name: SMPHSGEN.HTM)

The HTML source is indicated below.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<meta http-equiv="Pragma" content="no-cache">
<title>Sample screen for historical graph display part</title>
</head>
<body>
<h1>Sample screen for historical graph display part</h1>
<!-- Communication part -->
<applet code="WSCom.class" codebase="/PARTS/" width="0" height="0">
<param name="INTERVAL" value="1">
</applet>
<!-- Historical graph display part -->
<applet code="WSHstgrp.class" codebase="/PARTS/" width="800" height="400">
<param name="LOGNO"          value="1">
<param name="GRAPHNO"        value="5">
<param name="ELMNO1"         value="1">
<param name="ELMNO2"         value="2">
<param name="ELMNO3"         value="3">
<param name="ELMNO4"         value="4">
<param name="ELMNO5"         value="5">
<param name="GRCOLOR1"       value="Blue">
<param name="GRCOLOR2"       value="Red">
<param name="GRCOLOR3"       value="Green">
<param name="GRCOLOR4"       value="Aqua">
<param name="GRCOLOR5"       value="Maroon">
<param name="BKCOLOR"        value="White">
<param name="DSPCOLOR"       value="Black">
<param name="DSPBKCOLOR"     value="White">
<param name="DSPLNCOLOR"     value="Red">
<param name="APLCOLOR"       value="Gray">
<param name="POINT"          value="100">
<param name="UPPER"          value="32767">
<param name="LOWER"          value="-32768">
<param name="YLINE"          value="10">
<param name="XLINE"          value="15">
<param name="DSPTIME"        value="1">
<param name="DSPDATA"        value="1">
<param name="DSPBOX"         value="1">
</applet>
</body>
</html>
```

(c) Storage of HTML file

Transfer the HTML file to the Web server module by performing FTP operation.

File storage destination: [/ROM/WWW/USER/SMPHSGEN.HTM]

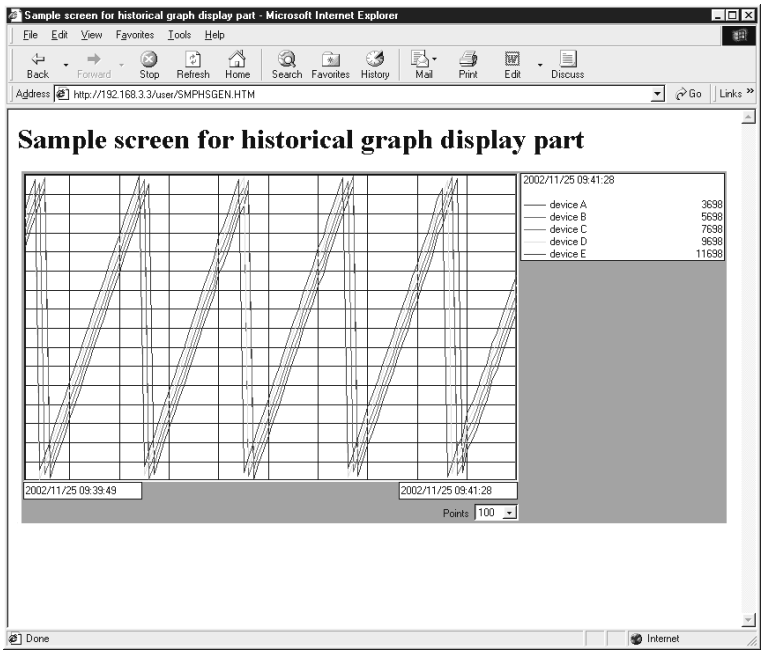
(d) Sample screen display

Display the sample screen.

(Example) When accessing the Web server module by one-to-one connection

Sample screen address:

[http://192.168.3.3/USER/SMPHSGEN.HTM]



(4) Precautions for using the historical graph display parts

The vertical axis line intervals of the historical graph parts may not be constant depending on the display resolution and specified width of the historical graph display parts.

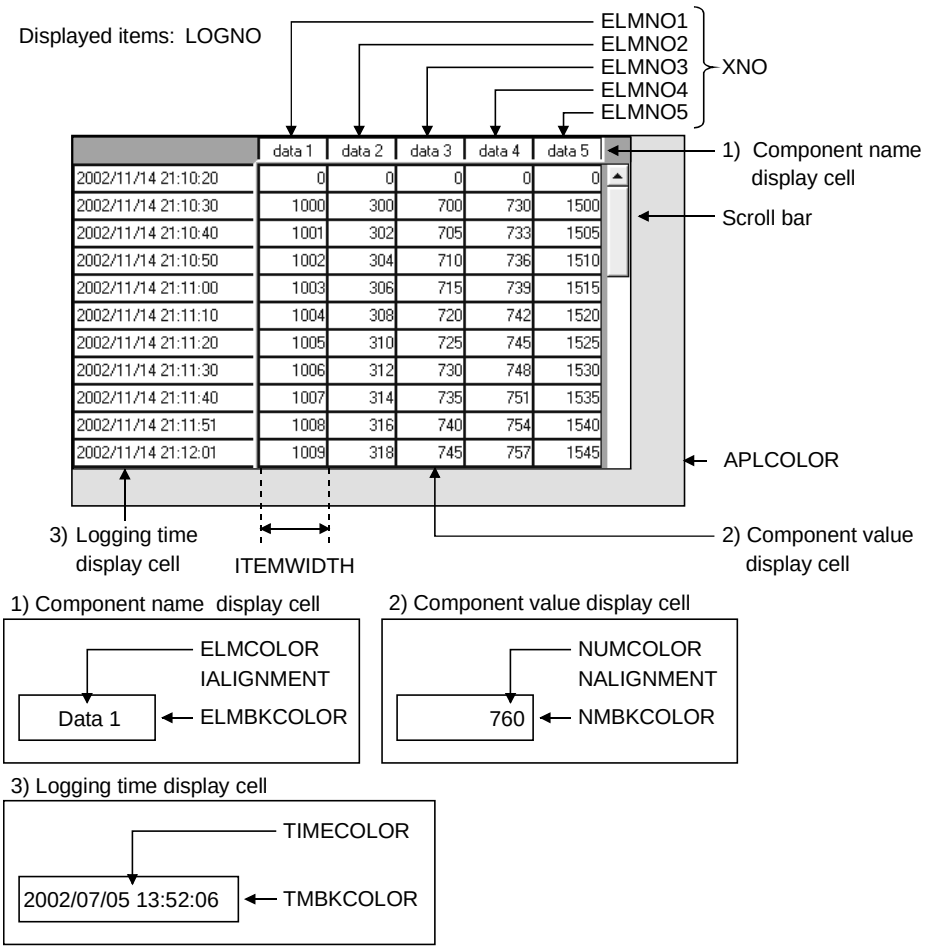
The vertical axis line intervals can be made constant by adjusting the width (WIDTH value described in HTML) of the Java applet that displays the historical graph display parts.

Refer to Section 7.2.1 for the HTML description method.

7.2.8 Historical data display parts

The logging data are displayed in the table form.
Up to 100 pieces of logging data can be displayed.
The latest logged data is displayed at the bottom end.
At the lowest end of the graph, new data is automatically added every time logging is performed. (Old data is erased.)

(1) Specifications

Item	Description
File name	WSHstdat.class
Number of components (Column number)	Up to 10 components
Display form	

(2) Parameter

Item	Description	Setting Range	Initial Value
LOGNO	Sets the logging data for historical data display using the logging setting No. (Refer to Section 6.4.4)	1 to 64	Must be set
XNO(∗1)	Sets the number of item components (columns).	1 to 10	Must be set
ELMNO1 to ELMNO10	Sets the component for historical data display using the component setting No. (Refer to Section 6.3.3)	1 to 64	Must be set
NUMCOLOR	Sets the display color of the component value display cell.	String	Black
NMBKCOLOR	Sets the background color of the component value display cell.	String	White
ELMCOLOR	Sets the display color of the component name display cell.	String	Black
ELMBKCOLOR	Sets the background color of the component name display cell.	String	White
TIMECOLOR	Sets the character color of the logging time display cell.	String	Black
TMBKCOLOR	Sets the background color of the logging time display cell.	String	White
APLCOLOR	Sets the background color (undrawn area) of the Java applet.	String	Gray
ITEMWIDTH	Sets the width of the component name/component value display cell.	1 to 300	100
NALIGNMENT	Sets the alignment of the component value display cell. 0: Left 1: Right 2: Centered	0 to 2	1 (Right alignment)
IALIGNMENT	Sets the alignment of the component name display cell. 0: Left 1: Right 2: Centered	0 to 2	2 (Centered)

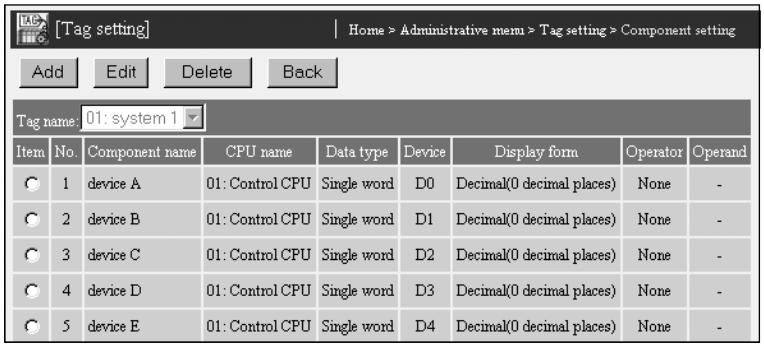
∗1 Be sure to set ELMNOs as many as the quantity specified at XNO.
Failure to do so will result in an error. (Refer to Section 7.5.)

(3) Sample screen for historical data display part

The following provides an example of creating the sample screen that displays the historical data display parts.
The sample screen (SMPHSDEN.HTM) is stored in the USER directory of the Web server module.

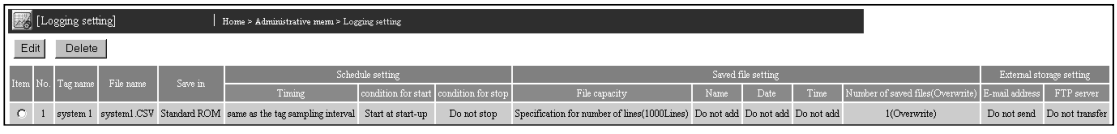
(a) Tag setting (refer to Section 6.3.3), logging setting (refer to Section 6.4.4)

1) Set the component setting No. 1 to 5 of the tag setting No. 1.



Item	No.	Component name	CPU name	Data type	Device	Display form	Operator	Operand
○	1	device A	01: Control CPU	Single word	D0	Decimal(0 decimal places)	None	-
○	2	device B	01: Control CPU	Single word	D1	Decimal(0 decimal places)	None	-
○	3	device C	01: Control CPU	Single word	D2	Decimal(0 decimal places)	None	-
○	4	device D	01: Control CPU	Single word	D3	Decimal(0 decimal places)	None	-
○	5	device E	01: Control CPU	Single word	D4	Decimal(0 decimal places)	None	-

2) Set the logging setting No. 1.



Item	No.	Tag name	File name	Save in	Schedule setting			Saved file setting					External storage setting	
					Timing	condition for start	condition for stop	File capacity	Name	Date	Time	Number of saved files(Overwrite)	E-mail address	FTP server
○	1	system 1	system1.CSV	Standard ROM	same as the tag sampling interval	Start at start-up	Do not stop	Specification for number of lines(1000Lines)	Do not add	Do not add	Do not add	1(Overwrite)	Do not send	Do not transfer

3) Click on the "Update" button on the Setting update screen to update the setting.

(b) Creation of HTML file (File name: SMPHSDEN.HTM)
The HTML source is indicated below.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<meta http-equiv="Pragma" content="no-cache">
<title>Sample screen for historical data display part</title>
</head>
<body>
<h1>Sample screen for historical data display part</h1>
<!-- Communication part -->
<applet code="WSCom.class" codebase="/PARTS/" width="0" height="0">
<param name="INTERVAL" value="1">
</applet>
<!-- Historical data display part -->
<applet code="WSHstdat.class" codebase="/PARTS/" width="655"
height="400">
<param name="LOGNO"          value="1">
<param name="XNO"            value="5">
<param name="ELMNO1"         value="1">
<param name="ELMNO2"         value="2">
<param name="ELMNO3"         value="3">
<param name="ELMNO4"         value="4">
<param name="ELMNO5"         value="5">
<param name="NUMCOLOR"       value="Black">
<param name="NMBKCOLOR"      value="White">
<param name="ELMCOLOR"       value="Black">
<param name="ELMBKCOLOR"     value="White">
<param name="TIMECOLOR"      value="Black">
<param name="TMBKCOLOR"      value="White">
<param name="APLCOLOR"       value="Gray">
<param name="ITEMWIDTH"      value="100">
<param name="NALIGNMENT"     value="1">
<param name="IALIGNMENT"     value="2">
</applet>
</body>
</html>
```

(c) Storage of HTML file
Transfer the HTML file to the Web server module by performing FTP operation.
File storage destination: [/ROM/WWW/USER/SMPHSDEN.HTM]

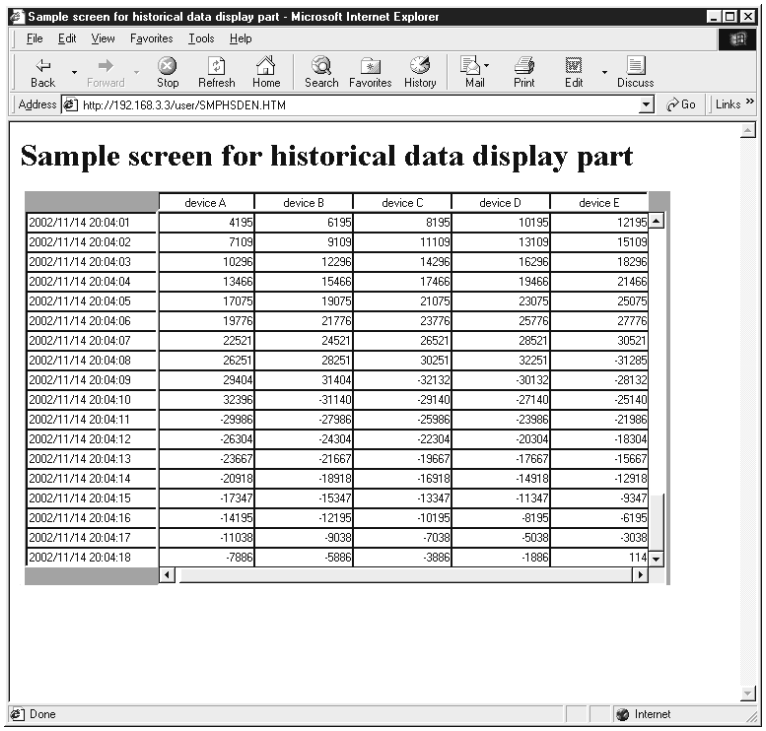
(d) Sample screen display

Display the sample screen.

(Example) When accessing the Web server module by one-to-one connection

Sample screen address:

[http://192.168.3.3/USER/SMPHSDEN.HTM]

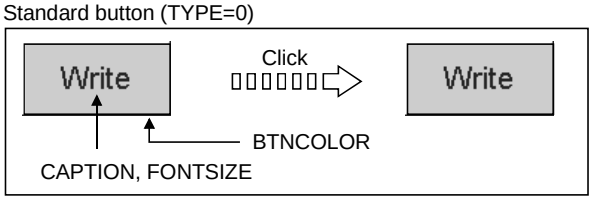
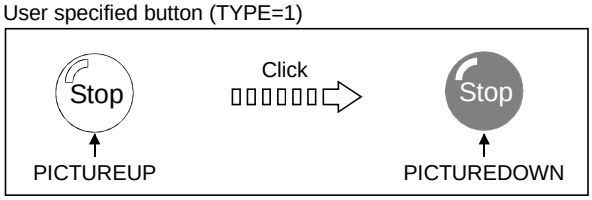
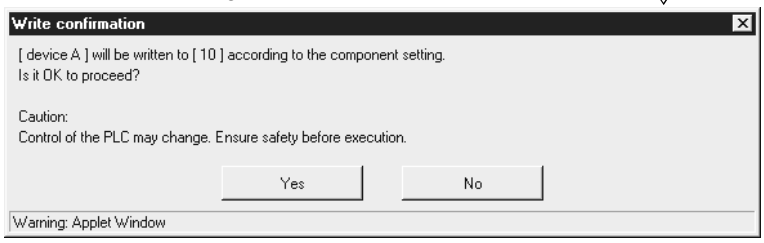

Sample screen for historical data display part - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss
Address http://192.168.3.3/user/SMPHSDEN.HTM
Go Links
Sample screen for historical data display part
Done
Internet

	device A	device B	device C	device D	device E
2002/11/14 20:04:01	4195	6195	8195	10195	12195
2002/11/14 20:04:02	7109	9109	11109	13109	15109
2002/11/14 20:04:03	10296	12296	14296	16296	18296
2002/11/14 20:04:04	13466	15466	17466	19466	21466
2002/11/14 20:04:05	17075	19075	21075	23075	25075
2002/11/14 20:04:06	19776	21776	23776	25776	27776
2002/11/14 20:04:07	22521	24521	26521	28521	30521
2002/11/14 20:04:08	26251	28251	30251	32251	-31285
2002/11/14 20:04:09	29404	31404	-32132	-30132	-28132
2002/11/14 20:04:10	32396	-31140	-29140	-27140	-25140
2002/11/14 20:04:11	-29986	-27986	-25986	-23986	-21986
2002/11/14 20:04:12	-26304	-24304	-22304	-20304	-18304
2002/11/14 20:04:13	-23667	-21667	-19667	-17667	-15667
2002/11/14 20:04:14	-20918	-18918	-16918	-14918	-12918
2002/11/14 20:04:15	-17347	-15347	-13347	-11347	-9347
2002/11/14 20:04:16	-14195	-12195	-10195	-8195	-6195
2002/11/14 20:04:17	-11038	-9038	-7038	-5038	-3038
2002/11/14 20:04:18	-7886	-5886	-3886	-1886	114

7.2.9 Write button parts

The specified value is written to the specified tag component.
Only the user having the tag component write authority is allowed to write a value to a tag component with the write button part. Refer to Section 4.6.5 for the user authority.

(1) Specifications

Item	Description
File name	WSWrtbtn.class
Component type that can be specified	Single word, Double word, Real number, Bit, String
Display form	・Written items : TAGNO, ELMNO ・Set value : DATA ・Standard button (TYPE=0)  ・User specified button (TYPE=1)  ・Write confirmation dialog box : CONFIRM, LANGUAGE 

(2) Parameter

Item	Description	Setting Range	Initial Value
TAGNO	Sets the tag, where a value will be written, with the tag setting No. (Refer to Section 6.3.3.)	1 to 64	Must be set
ELMNO	Sets the component, where a value will be written, with the component setting No. (Refer to Section 6.3.3.)	1 to 64	Must be set
DATA	Sets the value to be written. (∗1) (∗2)	Depends on the data type of the specified tag component.	Must be set
TYPE	Sets the type of the button to be displayed. 0: Standard 1: User specified	0, 1	0 (Standard)

Item	Description	Setting Range	Initial Value
CAPTION	Sets the character string to be displayed on the standard button (TYPE=0). (Invalid when the user specified button (TYPE=1) is selected.)	String	File not set (Not displayed).
FONTSIZE	Sets the character size to be displayed on the standard button (TYPE=0).	8 to 72	20
BTNCOLOR	Sets the color of the standard button (TYPE=0). (Invalid when the user specified button (TYPE=1) is selected.)	String	Gray
PICTUREUP	Sets the file (.JPG, .GIF) to be displayed on the user specified button (TYPE=1). (Invalid when the standard button (TYPE=0) is selected.)	String (.JPG, .GIF)	File not set (Not displayed)
PICTUREDOWN	Sets the file (.JPG, .GIF) to be displayed when the user specified button (TYPE=1) is clicked. (Invalid when the standard button (TYPE=0) is selected.)	String (.JPG, .GIF)	Same file as set at PICTUREUP
APLCOLOR	Set the background cololor (undrawn area) of the Java applet.	String	Gray
CONFIRM	Sets whether the write confirmation dialog box will be displayed nor not. 0: Not displayed 1: Displayed	0, 1	1 (Displayed)
LANGUAGE	Selects the language of the write confirmation dialog box. 0: Japanese 1: English	0, 1	1 (English)

∗1 When operation specification has been set to the target component, carry out an inverse operation to operation specification for the setting value and write the result to the device.

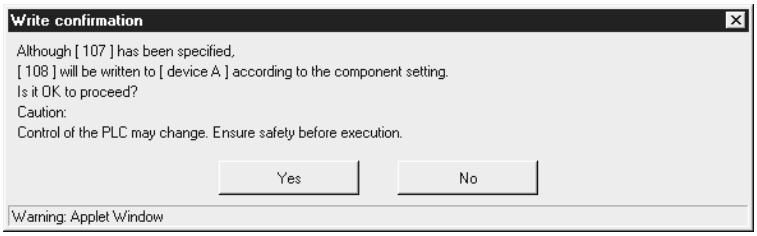
(Example) When "100" is set as the setting value for the component in which "Single word" has been set as Data type and "×2" as Operation specification, "100 / 2 = 50" is actually written to the device.

Note that, an error may be produced between the setting value and the actually written component value.

(Example) When "107" is set as the setting value for a component in which "Single word" has been set as Data type and "×2" as Operation specification, "107 / 2 = 54" is actually written to the device.

The component value to be displayed on the Tag data monitor is "54 × 2 = 108".

In the above case, the following confirmation screen is displayed when CONFIRM = 1.


Write confirmation
Although [107] has been specified,
[108] will be written to [device A] according to the component setting.
Is it OK to proceed?
Caution:
Control of the PLC may change. Ensure safety before execution.
Yes
No
Warning: Applet Window

∗2 When a real number is written to the target component, a rounding error may be produced.

(3) Sample screen for write button part

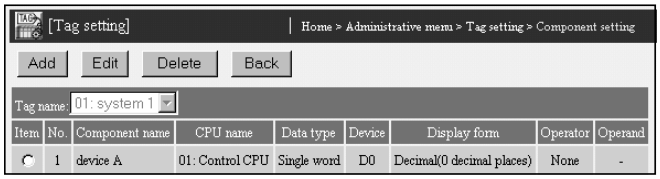
The following provides an example of creating the sample screen that displays the write button parts.

The sample screen (Smpwbten.htm) is stored in the USER directory of the Web server module.

(a) Tag setting (refer to Section 6.3.3)

1) Set "Data write" in the tag setting No. 1 to "Enable".

2) Set the component setting No. 1 of the tag setting No. 1.



3) Click on the "Update" button on the Setting update screen to update the setting.

(b) Creation of HTML file (File name: Smpwbten.htm)

The HTML source is indicated below.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
 <head>
  <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
  <meta http-equiv="Pragma" content="no-cache">
  <title>
   Sample screen for write button part
  </title>
 </head>
 <body>
  <h1>
   Sample screen for write button part
  </h1><!-- Communication part -->
  <applet code="WSCom.class" codebase="/PARTS/" width="0" height="0">
   <param name="INTERVAL" value="1">
  </applet> <!-- Write button part -->
  <applet code="WSWrtbtn.class" codebase="/PARTS/" width="100"
   height="50">
   <param name="TAGNO" value="1">
   <param name="ELMNO" value="1">
   <param name="DATA" value="10">
   <param name="TYPE" value="0">
   <param name="CAPTION" value="Write">
   <param name="FONTSIZE" value="20">
   <param name="BTNCOLOR" value="Gray">
   <param name="APLCOLOR" value="Gray">
   <param name="CONFIRM" value="1">
   <param name="LANGUAGE" value="1">
  </applet>
 </body>
</html>
```

(c) Storage of HTML file

Transfer the HTML file to the Web server module by performing FTP operation.

File storage destination: [/ROM/WWW/USER/ Smpwbten.htm]

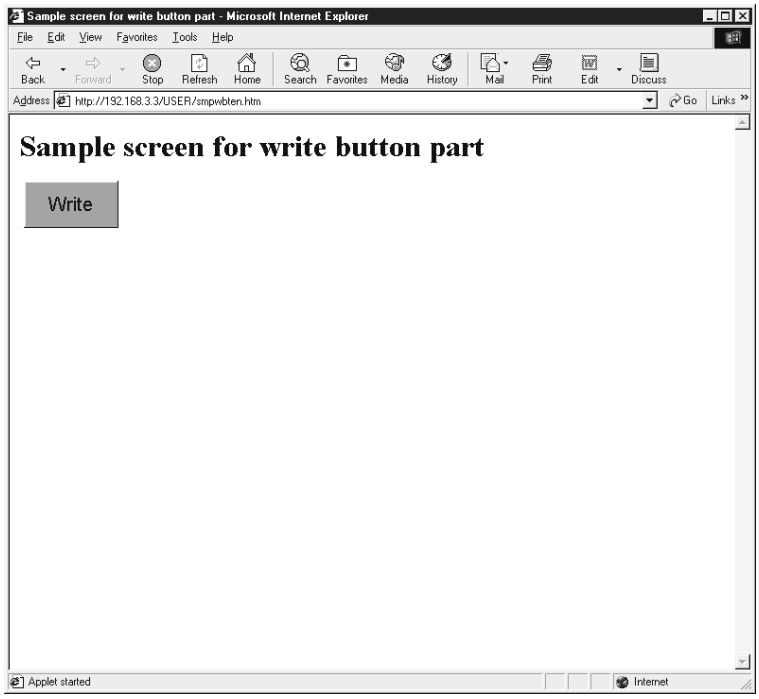
(d) Sample screen display

Display the sample screen.

(Example) When accessing the Web server module by one-to-one connection

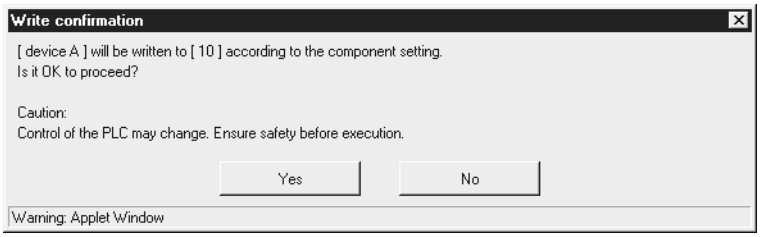
Sample screen address:

[http: //192.168.3.3/USER/ Smpwbten.htm]

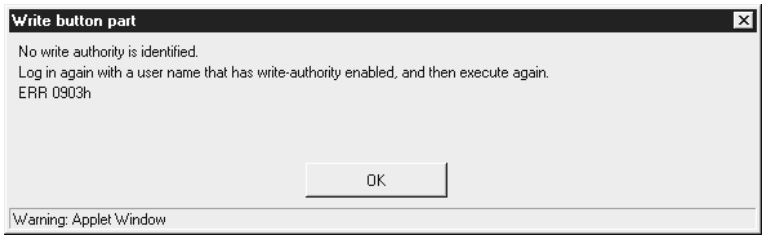

Sample screen for write button part - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History Mail Print Edit Discuss
Address http://192.168.3.3/USER/smpwbten.htm
Go Links
Sample screen for write button part
Write
Applet started
Internet

(e) Precautions for using the write button parts

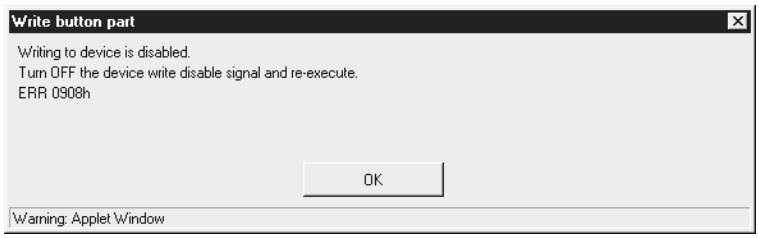
1) Writing a value to a tag component with the write button part may affect the control of the PLC CPU. Ensure safety before execution. When CONFIRM = 1, the following confirmation screen appears.


Write confirmation
[device A] will be written to [10] according to the component setting.
Is it OK to proceed?
Caution:
Control of the PLC may change. Ensure safety before execution.
Yes
No
Warning: Applet Window

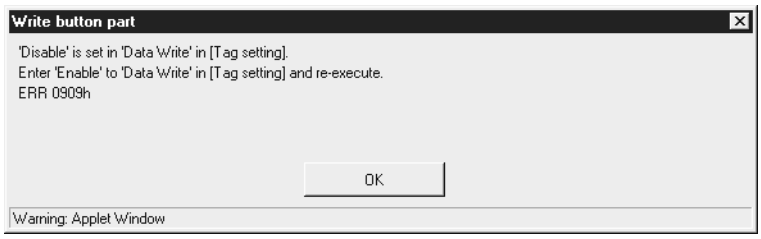
2) A user without the tag component write authority is not allowed to write a value to a tag component with the write button part.
When a write is attempted, the following screen appears.


Write button part
No write authority is identified.
Log in again with a user name that has write-authority enabled, and then execute again.
ERR 0903h
OK
Warning: Applet Window

3) When Device write disable request (YA) has been set to "Disable", writing to a tag component with the write button part is not available.
When a write is attempted, the following screen appears.



4) When "Data write" of the tag setting has been set to "Disable", writing to a tag component with the write button part is not available. (Refer to Section 6.3.3 for the tag setting.)
When a write is attempted, the following screen appears.


Write button part
'Disable' is set in 'Data Write' in [Tag setting].
Enter 'Enable' to 'Data Write' in [Tag setting] and re-execute.
ERR 0909h
OK
Warning: Applet Window

7.2.10 Device monitor parts

A monitor screen having the same display form as in the device monitor of the standard screen is displayed.
Refer to Section 6.2.1 for the device monitor.

(1) Specifications

Item	Description
File name	DevMon.class
Display form	Same as in the device monitor of the standard screen.

(2) Parameter

Item	Description	Setting Range	Initial Value
BKCOLOR	Sets the background color.	String	Gray
LANGUAGE	Selects the display language. 0: Japanese 1: English	0, 1	1 (English)

(3) Sample screen for device monitor part

The sample screen (Smpdvmen.htm) is stored in the USER directory of the Web server module.

(4) Precautions for using the device monitor parts

Be sure to specify the applet size with the following values.
Refer to Section 7.2.1 for how to describe the applet size.

Language	Width	Height
Japanese (LANGUAGE=0)	500	500
English (LANGUAGE=1)	500	500

7.2.11 Tag data monitor parts

A monitor screen having the same display form as in the tag data monitor of the standard screen is displayed.
Refer to Section 6.2.2 for the tag data monitor.

(1) Specifications

Item	Description
File name	TagMon.class
Display form	Same as in the tag data monitor of the standard screen.

(2) Parameter

Item	Description	Setting Range	Initial Value
BKCOLOR	Sets the background color.	String	Gray
LANGUAGE	Selects the display language. 0: Japanese 1: English	0, 1	1 (English)

(3) Sample screen for tag data monitor part

The sample screen (Smptgmen.htm) is stored in the USER directory of the Web server module.

(4) Precautions for using the tag data monitor parts

Be sure to specify the applet size with the following values.
Refer to Section 7.2.1 for how to describe the applet size.

Language	Width	Height
Japanese (LANGUAGE=0)	600	500
English (LANGUAGE=1)	600	500

7.2.12 Logging monitor parts

A monitor screen having the same display form as in the logging monitor of the standard screen is displayed.
Refer to Section 6.2.3 for the logging monitor.

(1) Specifications

Item	Description
File name	LogMon.class
Display form	Same as in the logging monitor of the standard screen.

(2) Parameter

Item	Description	Setting Range	Initial Value
UPPER	Sets the upper limit of the scale when a graph is displayed.	Decimal integer, real number	Automatic setting
LOWER	Sets the lower limit of the scale when a graph is displayed.	Decimal integer, real number	Automatic setting
XLINE	Sets the number of horizontal lines on a graph.	0 to 9	3
POINT	Sets the number of display points on a graph. (Setting range: 10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10000)	(As indicated on the left)	Automatic setting
BKCOLOR	Sets the background color.	String	Gray
LANGUAGE	Selects the display language. 0: Japanese 1: English	0, 1	1 (English)

(3) Sample screen for logging monitor part

The sample screen (Smplgmen.htm) is stored in the USER directory of the Web server module.

(4) Precautions for using the logging monitor parts

Be sure to specify the applet size with the following values.
Refer to Section 7.2.1 for how to describe the applet size.

Language	Width	Height
Japanese (LANGUAGE=0)	820	500
English (LANGUAGE=1)	820	500

7.2.13 Event history monitor parts

A monitor screen having the same display form as in the event history monitor of the standard screen is displayed.
Refer to Section 6.2.4 for the event history monitor.

(1) Specifications

Item	Description
File name	EveMon.class
Display form	Same as in the event history monitor of the standard screen.

(2) Parameter

Item	Description	Setting Range	Initial Value
BKCOLOR	Sets the background color.	String	Gray
LANGUAGE	Selects the display language. 0: Japanese 1: English	0, 1	1 (English)

(3) Sample screen for event history monitor part

The sample screen (Smpevmen.htm) is stored in the USER directory of the Web server module.

(4) Precautions for using the event history monitor parts

Be sure to specify the applet size with the following values.
Refer to Section 7.2.1 for how to describe the applet size.

Language	Width	Height
Japanese (LANGUAGE=0)	1054	500
English (LANGUAGE=1)	1054	500

7.2.14 PLC diagnostics monitor parts

A monitor screen having the same display form as in the PLC diagnostics monitor of the standard screen is displayed.
Refer to Section 6.2.5 for the PLC diagnostics monitor.

(1) Specifications

Item	Description
File name	DiaMon.class
Display form	Same as in the PLC diagnostics monitor of the standard screen.

(2) Parameter

Item	Description	Setting Range	Initial Value
BKCOLOR	Sets the background color.	String	Gray
LANGUAGE	Selects the display language. 0: Japanese 1: English	0, 1	1 (English)

(3) Sample screen for PLC diagnostics monitor part

The sample screen (Smpdimen.htm) is stored in the USER directory of the Web server module.

(4) Precautions for using the PLC diagnostics monitor parts

Be sure to specify the applet size with the following values.
Refer to Section 7.2.1 for how to describe the applet size.

Language	Width	Height
Japanese (LANGUAGE=0)	520	500
English (LANGUAGE=1)	520	500

7.2.15 Self-diagnostics monitor parts

A monitor screen having the same display form as in the self-diagnostics monitor of the standard screen is displayed.
Refer to Section 6.2.6 for the self-diagnostics monitor.

(1) Specifications

Item	Description
File name	UniMon.class
Display form	Same as in the self-diagnostics monitor of the standard screen.

(2) Parameter

Item	Description	Setting Range	Initial Value
BKCOLOR	Sets the background color.	String	Gray
LANGUAGE	Selects the display language. 0: Japanese 1: English	0, 1	1 (English)

(3) Sample screen for self-diagnostics monitor part

The sample screen (Smpunmen.htm) is stored in the USER directory of the Web server module.

(4) Precautions for using the self-diagnostics monitor parts

Be sure to specify the applet size with the following values.
Refer to Section 7.2.1 for how to describe the applet size.

Language	Width	Height
Japanese (LANGUAGE=0)	700	500
English (LANGUAGE=1)	1024	500

7.3 SSI Parts

This section explains the SSI parts.
An SSI parts list is given below.

Part Name	Function	Reference Section
SSI read parts	By embedding an SSI part in HTML, a tag component name or tag component value is displayed.	Section 7.3.1

7.3.1 SSI read parts

By embedding an SSI part in HTML, a tag component name or tag component value is displayed.

(1) Specifications

Item	Description
Format	<!--#exec cgi="WSReadS. cgi TAGNO=xx, ELMNO=xx, MODE=xx"-->

(2) Parameter

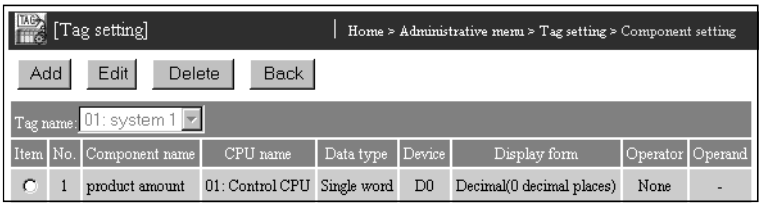
Item	Description	Setting Range	Initial Value
TAGNO	Sets the tag to be displayed with the tag setting No. (Refer to Section 6.3.3)	1 to 64	Must be set
ELMNO	Sets the component to be displayed with the component setting No. (Refer to Section 6.3.3.)	1 to 64	Must be set
MODE	Selects the data type to be displayed. 0: Display the tag component name 1: Display the tag component value	0, 1	1 (Display the tag component value)

(3) Sample screen for SSI read part

The following provides an example of creating the sample screen that displays the SSI read parts.
The sample screen (Smprdsen.htm) is stored in the USER directory of the Web server module.

(a) Tag setting (refer to Section 6.3.3)

1) Set the component setting No. 1 of the tag setting No. 1.



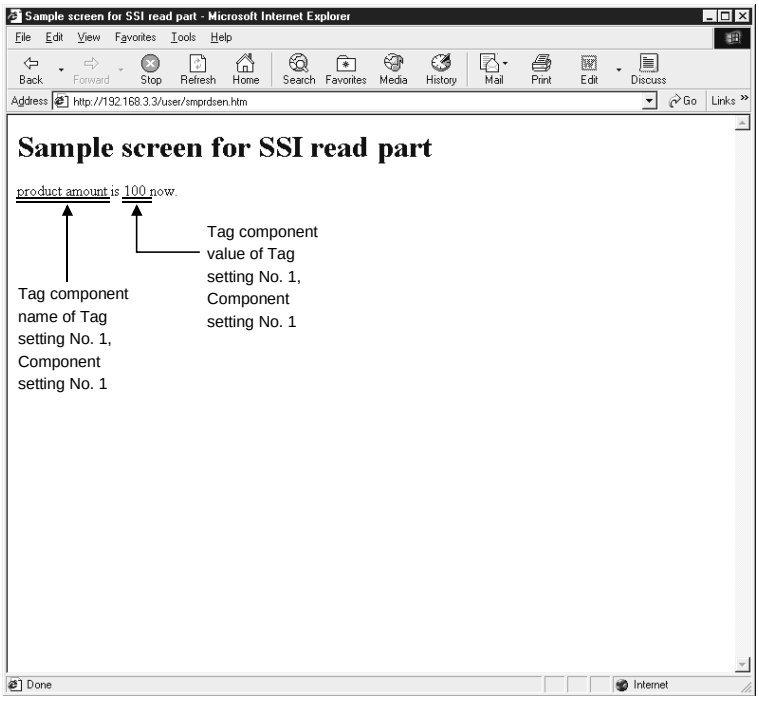
2) Click on the "Update" button on the Setting update screen to update the setting.

(b) Creation of HTML file (File name: Smprdsen.htm)
The HTML source is indicated below.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
 <head>
  <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
  <meta http-equiv="Pragma" content="no-cache">
  <title>
   Sample screen for SSI read part
  </title>
 </head>
 <body>
  <h1>
   Sample screen for SSI read part
  </h1>
  <!--#exec cgi="WSReadS.cgi TAGNO=1,ELMNO=1,MODE=0"-->
  is
  <!--#exec cgi="WSReadS.cgi TAGNO=1,ELMNO=1,MODE=1"-->
  now.
 </body>
</html>
```

(c) Storage of HTML file
Transfer the HTML file to the Web server module by performing FTP operation.
File storage destination: [/ROM/WWW/USER/Smprdsen.htm]

(d) Sample screen display
Display the sample screen.
(Example) When accessing the Web server module by one-to-one connection
Sample screen address:
[http://192.168.3.3/USER/Smprdsen.htm]


Sample screen for SSI read part - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History Mail Print Edit Discuss
Address http://192.168.3.3/user/smprdsen.htm
Go Links
Sample screen for SSI read part
product amount is 100 now.
Tag component name of Tag setting No. 1, Component setting No. 1
Tag component value of Tag setting No. 1, Component setting No. 1
Done
Internet

7.4 CGI Parts

This section explains the CGI parts.
A CGI parts list is given below.

Part Name	Function	Reference Section
CGI write parts	When the button is clicked, the specified value is written to the tag component value.	Section 7.4.1
CGI read parts	When the button is clicked, the tag component value is read.	Section 7.4.2
Disconnect parts	When the button is clicked, the Web server module is disconnected from the network.	Section 7.4.3

7.4.1 CGI write parts

When the button is clicked, the specified value is written to the tag component value.
Only the user having the tag component write authority is allowed to write a value to a tag component with the CGI write part. Refer to Section 4.6.5 for the user authority.

(1) Specifications

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Format</td><td>
<FORM METHOD="POST" ACTION="/WSWriteC. cgi">
<INPUT TYPE="xxxxx" NAME="TAGNO" VALUE="yyyy">
<INPUT TYPE="xxxxx" NAME="ELMNO" VALUE="yyyy">
<INPUT TYPE="xxxxx" NAME="DATA" VALUE="yyyy">
<INPUT TYPE="xxxxx" NAME="CONFIRM" VALUE="yyyy">
<INPUT TYPE="xxxxx" NAME="RESULT" VALUE="yyyy">
<INPUT TYPE="xxxxx" NAME="REFERER" VALUE="yyyy">
<INPUT TYPE="xxxxx" NAME="LANGUAGE" VALUE="yyyy">
<INPUT TYPE="submit" VALUE="characters on button">
</FORM>
• "Specify the TYPE attributes at "xxxxx". An example of specifying them is given below.
<table>
<tr><th>TYPE</th><th>NAME</th><th>VALUE</th><th>DESCRIPTION</th></tr>
<tr><td>text</td><td>Specify the parameter name. (Refer to ((2))</td><td>Need not be specified.</td><td>The text box is displayed.
The value entered into the text box becomes a parameter value.</td></tr>
<tr><td>hidden</td><td>Specify the parameter name. (Refer to ((2))</td><td>Specify the parameter value at "yyyy".</td><td>Nothing is displayed.</td></tr>
<tr><td>submit</td><td>Need not be specified.</td><td>Specify the button name.</td><td>The button is displayed.</td></tr>
</table>
</td></tr>
</table>

(2) Parameter

Item	Description	Setting Range	Initial Value
TAGNO	Sets the tag, where a value will be written, with the tag setting No. (Refer to Section 6.3.3.)	1 to 64	Must be set
ELMNO	Sets the component, where a value will be written, with the component setting No. (Refer to Section 6.3.3.)	1 to 64	Must be set
DATA	Sets the value to be written. (∗1) (∗2)	Depends on the data type of the specified tag component.	Must be set
CONFIRM	Sets whether the confirmation screen will be displayed or not. 0: Not displayed 1: Displayed	0, 1	1 (Displayed)
RESULT	• Selects how to display the result screen. 0: Display the result screen with the [Return] button 1: Display the result screen with the [Close] button • Specify this item when a script is described to open the other window and display the result.	0, 1	0 (Display the screen with the [Return] button)
REFERER	• Specifies the file name of the execution screen with the absolute path. When standard ROM is used: /USER/file name When Compact Flash™ card is used: /CF/USER/file name Clicking the [Return]/[Cancel] button returns to the execution screen.	String	Return to the execution screen. (Refer to (3) (d))
LANGUAGE	Selects the language of the confirmation and result screens. 0: Japanese 1: English	0, 1	1 (English)

∗1 When operation specification has been set to the target component, an inverse operation is performed on the setting value using the operation specification and the result is written to the device.

(Example) When "100" is set as the setting value for the component in which "Single word" has been set as Data type and "×2" as Operation specification, "100 / 2 = 50" is actually written to the device.

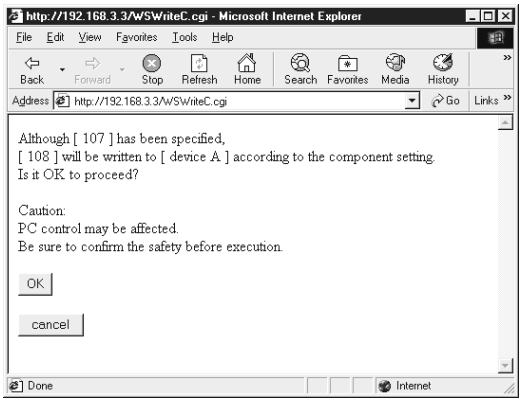
Note that, an error may be produced between the setting value and the actually written component value.

(Example) When "107" is set as the setting value for a component in which "Single word" has been set as Data type and "×2" as Operation specification, "107 / 2 = 54" is actually written to the device.

The component value to be displayed on the Tag data monitor is "54 × 2 = 108".

In the above case, the following confirmation screen is displayed when CONFIRM = 1.

7 - 50


http://192.168.3.3/WSWriteC.cgi - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History
Address http://192.168.3.3/WSWriteC.cgi
Go Links
Although [107] has been specified,
[108] will be written to [device A] according to the component setting.
Is it OK to proceed?
Caution:
PC control may be affected.
Be sure to confirm the safety before execution.
OK
cancel
Done
Internet

∗2 When a real number is written to the target component, a rounding error may be produced.

(3) Sample screen for CGI write part

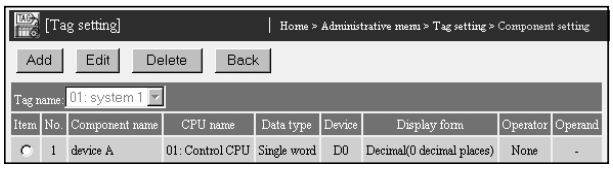
The following provides an example of creating the sample screen that displays the CGI write parts.

The sample screen (Smpwtcen.htm) is stored in the USER directory of the Web server module.

(a) Tag setting (refer to Section 6.3.3)

1) Set "Data write" in the tag setting No. 1 to "Enable".

2) Set the component setting No. 1 of the tag setting No. 1.



3) Click on the "Update" button on the Setting update screen to update the setting.

(b) Creation of HTML file (File name: Smpwtcen.htm)

The HTML source is indicated below.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
 <head>
  <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
  <meta http-equiv="Pragma" content="no-cache">
  <title>
   Sample screen for CGI write part
  </title>
 </head>
 <body>
  <h1>
   Sample screen for CGI write part
  </h1>
  <form method="post" action="/WSWriteC.cgi">
```

```
    Tag No.<br>
    <input type="text" name="TAGNO"><br>
    Component No.<br>
    <input type="text" name="ELMNO"><br>
    Value<br>
    <input type="text" name="DATA"><br>
    <hr>
    <input type="submit" value="Write">
    <input type="hidden" name="CONFIRM" value="1">
    <input type="hidden" name="RESULT" value="0">
    <input type="hidden" name="LANGUAGE" value="1">
    <input type="hidden" name="REFERER" value="/user/smpwtcen.htm">
   </form>
  </body>
</html>
```

(c) Storage of HTML file

Transfer the HTML file to the Web server module by performing FTP operation.

File storage destination: [/ROM/WWW/USER/Smpwtcen.htm]

(d) Sample screen display

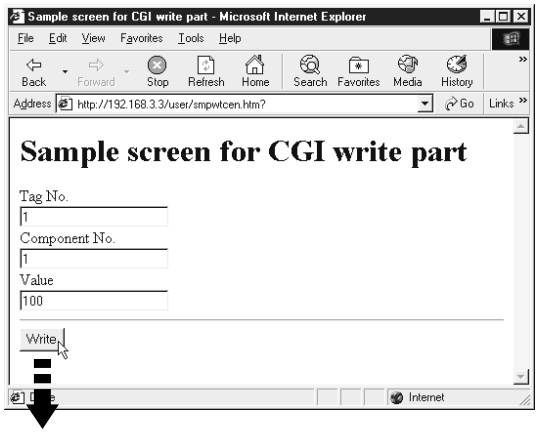
Display the sample screen.

(Example) When accessing the Web server module by one-to-one connection

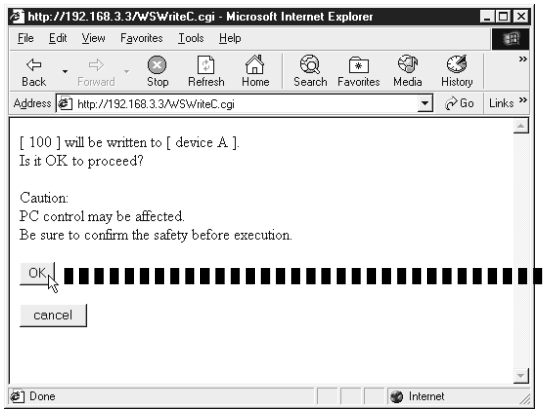
Sample screen address:

[http: //192.168.3.3/USER/ Smpwtcen.htm]

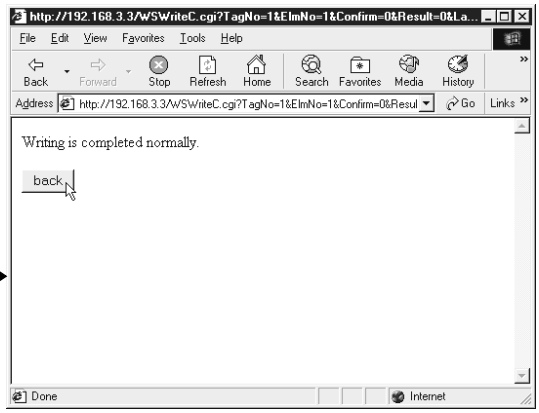
[Execution screen]



[Confirmation screen]


http://192.168.3.3/WSWriteC.cgi - Microsoft Internet Explorer
[100] will be written to [device A].
Is it OK to proceed?
Caution:
PC control may be affected.
Be sure to confirm the safety before execution.
OK
cancel

[Result screen]



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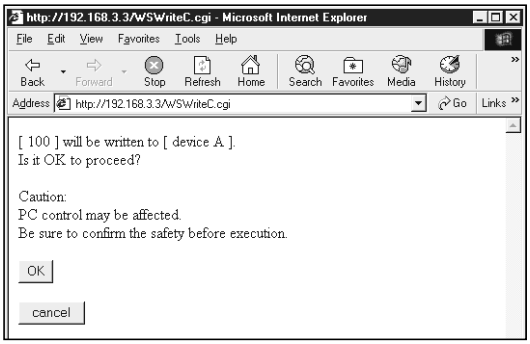
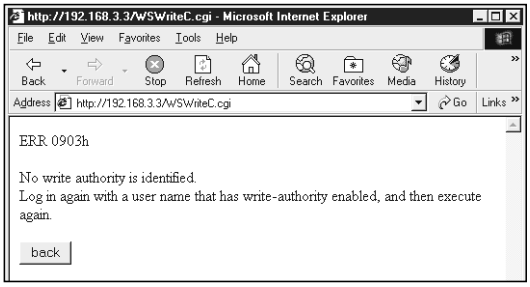
(e) Precautions for using the CGI write parts

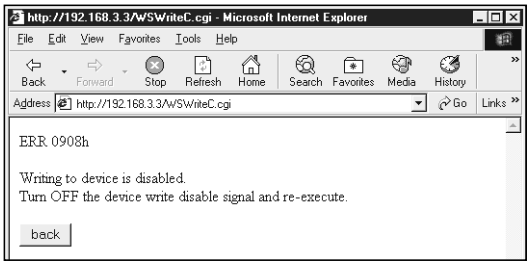
1) Writing a value to a tag component with the CGI write part may change the control of the PLC CPU. Ensure safety before execution.
When CONFIRM = 1, the following confirmation screen appears.


http://192.168.3.3/WSWriteC.cgi - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History
Address http://192.168.3.3/WSWriteC.cgi
Go Links
[100] will be written to [device A].
Is it OK to proceed?
Caution:
PC control may be affected.
Be sure to confirm the safety before execution.
OK
cancel

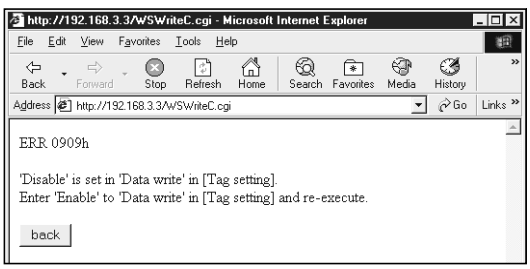
2) A user without the tag component write authority is not allowed to write a value to a tag component with the CGI write part.
When a write is attempted, the following screen appears.


http://192.168.3.3/WSWriteC.cgi - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History
Address http://192.168.3.3/WSWriteC.cgi
Go Links
ERR 0903h
No write authority is identified.
Log in again with a user name that has write-authority enabled, and then execute again.
back

3) When Device write disable request (YA) has been set to "Disable", writing to a tag component with the CGI write part is not available.
When a write is attempted, the following screen appears.


http://192.168.3.3/WSWriteC.cgi - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History
Address http://192.168.3.3/WSWriteC.cgi
Go Links
ERR 0908h
Writing to device is disabled.
Turn OFF the device write disable signal and re-execute.
back

4) When "Data write" of the tag setting has been set to "Disable", writing to a tag component with the CGI write part is not available. (Refer to Section 6.3.3 for the tag setting.)
When a write is attempted, the following screen appears.


http://192.168.3.3/WSWriteC.cgi - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History
Address http://192.168.3.3/WSWriteC.cgi
Go Links
ERR 0909h
'Disable' is set in 'Data write' in [Tag setting].
Enter 'Enable' to 'Data write' in [Tag setting] and re-execute.
back

7.4.2 CGI read parts

When the button is clicked, the tag component value is read.

(1) Specifications

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Format</td><td>
<FORM METHOD="POST" ACTION="/WSReadC. cgi">
<INPUT TYPE="xxxxx" NAME="TAGNO" VALUE="yyyy">
<INPUT TYPE="xxxxx" NAME="ELMNO" VALUE="yyyy">
<INPUT TYPE="xxxxx" NAME="MODE" VALUE="yyyy">
<INPUT TYPE="xxxxx" NAME="RESULT " VALUE="yyyy">
<INPUT TYPE="xxxxx" NAME="REFERER" VALUE="yyyy">
<INPUT TYPE="xxxxx" NAME="LANGUAGE" VALUE="yyyy">
<INPUT TYPE="submit" VALUE="characters on button">
</FORM>
• "Specify the TYPE attributes at "xxxxx". An example of specifying them is given below.
<table>
<tr><th>TYPE</th><th>NAME</th><th>VALUE</th><th>DESCRIPTION</th></tr>
<tr><td>text</td><td>Specify the parameter name. (Refer to ((2))</td><td>Need not be specified.</td><td>The text box is displayed.
The value entered into the text box becomes a parameter value.</td></tr>
<tr><td>hidden</td><td>Specify the parameter name. (Refer to ((2))</td><td>Specify the parameter value at "yyyy".</td><td>Nothing is displayed.</td></tr>
<tr><td>submit</td><td>Need not be specified.</td><td>Specify the button name.</td><td>The button is displayed.</td></tr>
</table>
</td></tr>
</table>

(2) Parameter

Item	Description	Setting Range	Initial Value
TAGNO	Sets the tag to be read with the tag setting No. (Refer to Section 6.3.3)	1 to 64	Must be set
ELMNO	Sets the component to be read with the component setting No. (Refer to Section 6.3.3.)	1 to 64	Must be set
MODE	Selects the data type to be read. 0: Read the tag component name 1: Read the tag component value	0, 1	1 (Read the tag component value)
RESULT	• Selects how to display the result screen. 0: Display the result screen with the [Return] button 1: Display the result screen with the [Close] button • Specify this item when a script is described to open the other window and display the result.	0, 1	0 (Display the screen with the [Return] button)
REFERER	• Specifies the file name of the execution screen with the absolute path. When standard ROM is used: /USER/file name When Compact Flash™ card is used: /CF/USER/file name Clicking the [Return] button returns to the execution screen.	String	Return to the execution screen. (Refer to (3) (d))
LANGUAGE	Selects the language of the result screen. 0: Japanese 1: English	0, 1	1 (English)

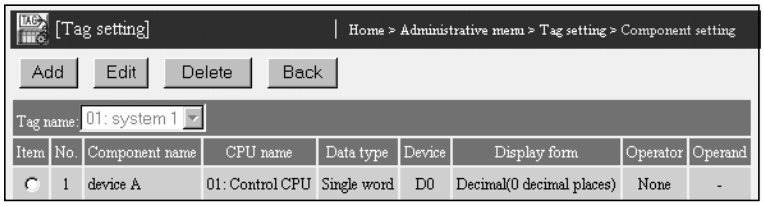
(3) Sample screen for CGI read part

The following provides an example of creating the sample screen that displays the CGI read parts.

The sample screen (Smprdcen.htm) is stored in the USER directory of the Web server module.

(a) Tag setting (refer to Section 6.3.3)

1) Set the component setting No. 1 of the tag setting No. 1.



2) Click on the "Update" button on the Setting update screen to update the setting.

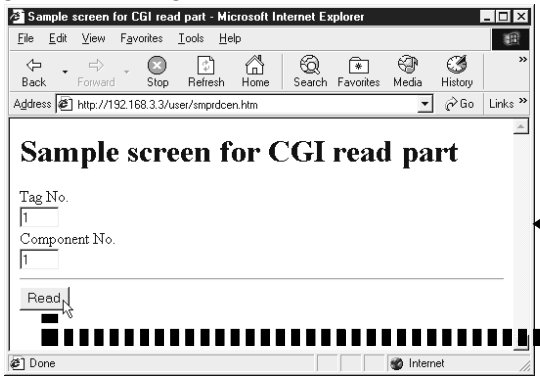
(b) Creation of HTML file (File name: Smprdcen.htm)
The HTML source is indicated below.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
 <head>
  <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
  <meta http-equiv="Pragma" content="no-cache">
  <title>
   Sample screen for CGI read part
  </title>
 </head>
 <body>
  <h1>
   Sample screen for CGI read part
  </h1>
  <form method="post" action="/WSReadC.cgi">
   Tag No.<br>
   <input type="text" size="4" name="TAGNO"><br>
   Component No.<br>
   <input type="text" size="4" name="ELMNO"><br>
   <hr>
   <input type="submit" value="Read">
   <input type="hidden" name="MODE" value="1">
   <input type="hidden" name="RESULT" value="0">
   <input type="hidden" name="LANGUAGE" value="1">
   <input type="hidden" name="REFERER" value="/user/smprdcen.htm">
  </form>
 </body>
</html>
```

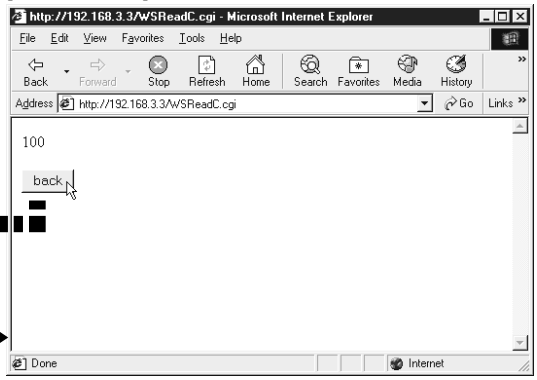
(c) Storage of HTML file
Transfer the HTML file to the Web server module by performing FTP operation.
File storage destination: [/ROM/WWW/USER/Smprdcen.htm]

(d) Sample screen display
Display the sample screen.
(Example) When accessing the Web server module by one-to-one connection
Sample screen address:
[http://192.168.3.3/USER/Smprdcen.htm]

[Execution screen]



[Result screen]



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7.4.3 Disconnect parts

When the button is clicked, the Web server module is disconnected from the network. Refer to Section 5.4 for network connecting/disconnecting processing for non-continuous connection.

(1) Specifications

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Format</td><td>
<FORM METHOD="POST" ACTION="/WSDscntC. cgi">
<INPUT TYPE="xxxxx" NAME="CONFIRM" VALUE="yyyy">
<INPUT TYPE="xxxxx" NAME="REFERER" VALUE="yyyy">
<INPUT TYPE="xxxxx" NAME="LANGUAGE" VALUE="yyyy">
<INPUT TYPE="submit" VALUE="characters on button">
</FORM>
• "Specify the TYPE attributes at "xxxxx". An example of specifying them is given below.
<table>
<tr><th>TYPE</th><th>NAME</th><th>VALUE</th><th>DESCRIPTION</th></tr>
<tr><td>text</td><td>Specify the parameter name. (Refer to ((2))</td><td>Need not be specified.</td><td>The text box is displayed.
The value entered into the text box becomes a parameter value.</td></tr>
<tr><td>hidden</td><td>Specify the parameter name. (Refer to ((2))</td><td>Specify the parameter value at "yyyy".</td><td>Nothing is displayed.</td></tr>
<tr><td>submit</td><td>Need not be specified.</td><td>Specify the button name.</td><td>The button is displayed.</td></tr>
</table>
</td></tr>
</table>

(2) Parameter

Item	Description	Setting Range	Initial Value
CONFIRM	Sets whether the confirmation screen will be displayed or not. 0: Not displayed 1: Displayed	0, 1	1 (Displayed)
REFERER	• Specifies the file name of the execution screen with the absolute path. When standard ROM is used: /USER/file name When Compact Flash™ card is used: /CF/USER/file name Clicking the "Cancel" button returns to the execution screen.	String	Return to the execution screen. (Refer to (3) (c))
LANGUAGE	Selects the language of the confirmation and result screens. 0: Japanese 1: English	0, 1	1 (English)

(3) Sample screen for disconnect part

The following provides an example of creating the sample screen that displays the disconnect parts.

The sample screen (Smpdscen.htm) is stored in the USER directory of the Web server module.

(a) Creation of HTML file (File name: Smpdscen.htm)

The HTML source is indicated as follows.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
 <head>
  <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
  <meta http-equiv="Pragma" content="no-cache">
  <title>
   Sample screen for disconnect part
  </title>
 </head>
 <body>
  <h1>
   Sample screen for disconnect part
  </h1>
  <form method="post" action="/WSDscntC.cgi">
   <input type="submit" value="Disconnect">
   <input type="hidden" name="CONFIRM" value="1">
   <input type="hidden" name="LANGUAGE" value="1">
   <input type="hidden" name="REFERER" value="/user/smpdscen.htm">
  </form>
 </body>
</html>
```

(b) Storage of HTML file

Transfer the HTML file to the Web server module by performing FTP operation.

File storage destination: [/ROM/WWW/USER/Smpdscen.htm]

(c) Sample screen display

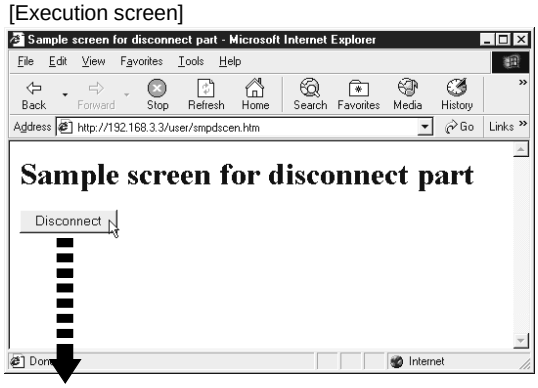
Display the sample screen.

(Example) When accessing the Web server module by one-to-one connection

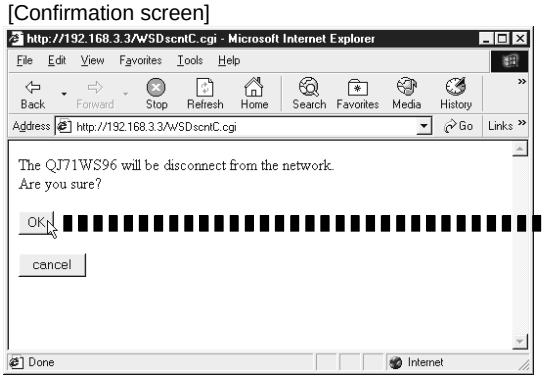
Sample screen address:

[http://192.168.3.3/USER/ Smpdscen.htm]

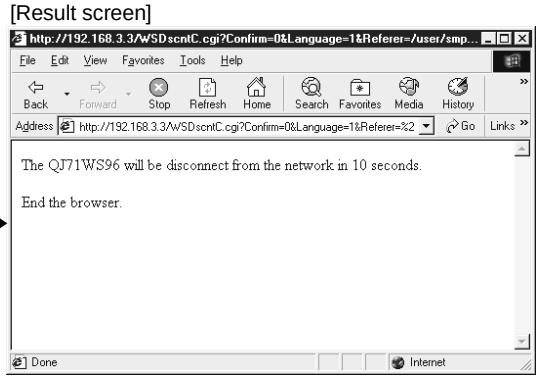
[Execution screen]


Sample screen for disconnect part - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History
Address http://192.168.3.3/user/smpdscen.htm
Go Links
Sample screen for disconnect part
Disconnect
Internet

[Confirmation screen]



[Result screen]


http://192.168.3.3/WSDscntC.cgi?Confirm=0&Language=1&Referer=/user/smp...
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History
Address http://192.168.3.3/WSDscntC.cgi?Confirm=0&Language=1&Referer=%2
Go Links
The QJ71WS96 will be disconnect from the network in 10 seconds.
End the browser.
Done
Internet

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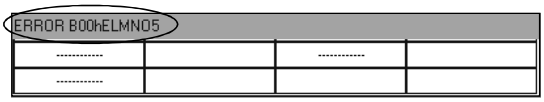
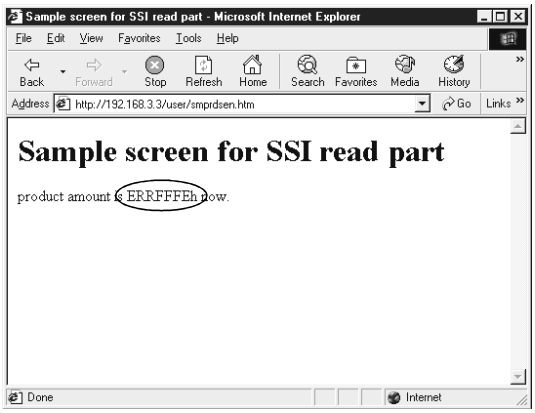
7.5 User Part Errors

If an error occurs in a user part (setting error, communication error, etc.), the corresponding error code is displayed in the user part display area.
When an error occurred, the user part stops operating.

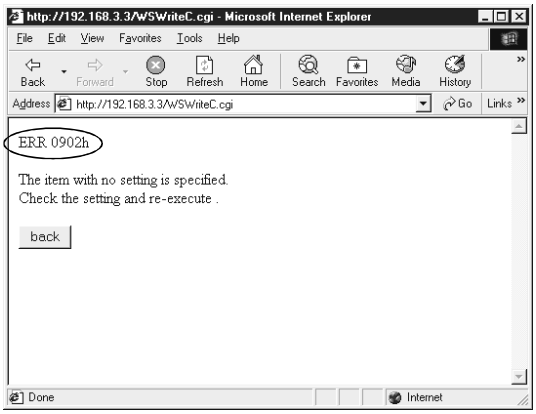
(Example) When an error occurred in a data block part



(Example) When an error occurred in an SSI read part


Sample screen for SSI read part - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History
Address http://192.168.3.3/user/smprdsen.htm
Go Links
Sample screen for SSI read part
product amount is ERRFFFEh now.
Done
Internet

(Example) When an error occurred in a CGI write part



To restore the user part, eliminate the error cause according to the error code and update the display screen in the Web browser.
Refer to Section 9.3 for the error code.

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8 DEDICATED INSTRUCTION

The dedicated instructions are designed to facilitate programming for using the functions of the intelligent function module.

8.1 Dedicated Instruction List

This chapter explains the following dedicated instructions.

Application	Instruction	Description	Reference section
E-mail transmission	WMSEND	Sends e-mail.	Section 8.2
FTP	FTPPUT	Transfers (PUT) a file to the FTP server.	Section 8.3
	FTPGET	Transfers (GET) a file from the FTP server.	Section 8.4
Tag	TAG	Issues a tag collection command. (Triggers a tag collection)	Section 8.5
Logging	LOG	Issues a logging command. (Triggers a logging)	Section 8.6
	LOGDEL	Deletes a saved file of logging data.	Section 8.7
	WFWRITE	Writes the device data of the PLC CPU to the user data file on the Compact Flash™ card.	Section 8.8
	WFREAD	Reads the user data file on the Compact Flash™ card to the device data of the PLC CPU.	Section 8.9
	WFDEL	Deletes the user data file on the Compact Flash™ card.	Section 8.10

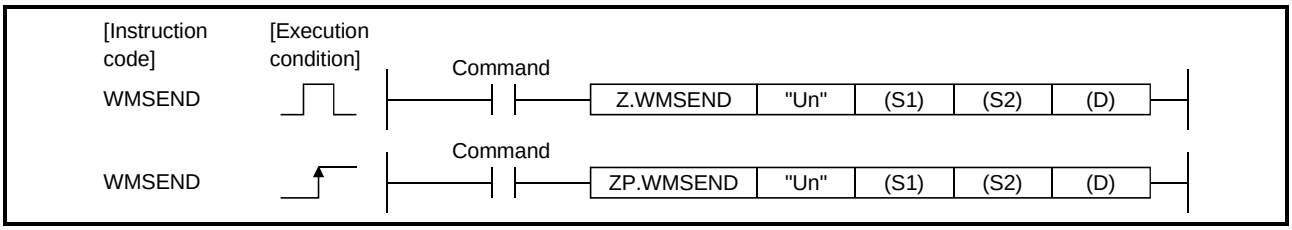
POINT

When changing the data (control data, request data, etc) specified in a dedicated instruction, make sure that execution of the dedicated instruction has been completed.

8.2 WMSEND Instruction

E-mail is sent with this instruction.

Setting data	Applicable device									
	Internal device (System, User)		File register	MELSECNET/H, MELSECNET/10 Direct J□\□		Special module U□\G□	Index register Zn	Constant		Others
	Bit	Word		Bit	Word			K, H	$	
(S1)	_	○		_				_	_	_
(S2)	_	○		_				_	_	_
(D)	○	○		_				_	_	_



Setting data

Setting data	Description	Setting side(∗1)	Data type
"Un"	Head I/O signal of the module (00 to FE: The first 2 digits when the I/O signal is represented in 3 digits)	User	BIN16bit
(S1)	Head number of the device that stores the control data	User, System	Device name
(S2)	Head number of the device that stores the e-mail data (subject + main text) to be sent	User	
(D)	Head number of the bit device that will be turned on for one scan when the instruction is normally completed. (D)+ 1 also turns on when the instruction is abnormally completed.	System	Bit

The local devices and the file registers for individual programs do not work as the devices for the setting data.

8

Control data

<table>
<tr><th>Device</th><th>Item</th><th>Setting data</th><th>Setting range</th><th>Setting side (*1)</th></tr>
<tr><td>(S1) + 0</td><td>Completion type/Send form</td><td>
<table>
<tr><td>b15 ～ b13</td><td>b12 ～ b8</td><td>b7</td><td>b6 ～ b0</td></tr>
<tr><td>0</td><td>2)</td><td>1)</td><td>0</td></tr>
</table>
1) Completion type (b7)
Set whether or not the clock data will be set to (S1) + 11 to (S1) + 15 in the case of abnormal completion.
0: Not set.
1: Set.
2) Send form (b8 to b12)
Set the send form of the e-mail.
• Main text (b12)
0: Main text not sent.
1: Main text sent.
• Attached file (b8 to b11)
<table>
<tr><th>b11</th><th>b10</th><th>b9</th><th>b8</th><th>Attached file</th></tr>
<tr><td>0</td><td>0</td><td>0</td><td>0</td><td>No attached file</td></tr>
<tr><td>1</td><td>0</td><td>0</td><td>0</td><td>Tag data</td></tr>
<tr><td>1</td><td>1</td><td>0</td><td>0</td><td>Logging data</td></tr>
<tr><td>1</td><td>0</td><td>1</td><td>0</td><td>User data file (binary file)</td></tr>
<tr><td>1</td><td>0</td><td>1</td><td>1</td><td>User data file (CSV file)</td></tr>
</table>
</td><td>(As in the left)</td><td>User</td></tr>
<tr><td>(S1) + 1</td><td>Completion status</td><td>The status of the instruction completion is stored.
0 : Normal completion
Other than 0 : Abnormal completion (Error code)(*2)</td><td>—</td><td>System</td></tr>
<tr><td>(S1) + 2</td><td>Destination No.</td><td>Set the e-mail destination with the set No. of "E-mail address (To:) setting" of the e-mail setting.
1 to 16: Destination No.</td><td>1 to 16</td><td>User</td></tr>
<tr><td>(S1) + 3</td><td>Tag/Logging No.</td><td>Set the tag data or logging data to be attached to the e-mail with the corresponding No. set in the tag setting or logging setting.
1 to 64: Setting No. of tag data or logging data to be attached</td><td>1 to 64</td><td>User</td></tr>
<tr><td>(S1) + 4
(S1) + 5</td><td>Logging history No.</td><td>Set the logging data to be attached to the e-mail.
0 : The current (latest) file is attached.
1 to FFFFFFFFH : The specified saved file is attached.
(Example) When attaching "00000010.CSV", set "00000010H".</td><td>0
to
FFFFFFFFH</td><td>User</td></tr>
<tr><td>(S1) + 6
(S1) + 7</td><td>System area</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td>(S1) + 8</td><td>Send data length</td><td>Set the data length (for subject + main text) of the e-mail stored in (S2) + 0 to (S2)+n. (Subject: 1 to 373, main text: 1 to 960)
1 to 1333: Data length of e-mail (Word)</td><td>1 to 1333</td><td>User</td></tr>
<tr><td>(S1) + 9</td><td>Subject length</td><td>Specify the data length of the subject of the e-mail stored in (S2) + 0 to (S2) + n.
1 to 373: Data length of subject (Word)</td><td>1 to 373</td><td>User</td></tr>
<tr><td>(S1) + 10</td><td>System area</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td>(S1) + 11</td><td>Clock set flag</td><td>Whether the clock data of (S1) + 12 to (S1) + 15 is enabled or disabled is stored.
0: Disable 1: Enable</td><td>0, 1</td><td>System</td></tr>
</table>

Device	Item	Setting data	Setting range	Setting side (*1)
(S1) + 12	Clock data (Set only when an error occurs)	Upper 8 bit: Month (01H to 12H), Lower 8 bit: Year (00H to 99H) Last 2 digits of the year	—	System
(S1) + 13		Upper 8 bit: Hour (00H to 23H), Lower 8 bit: Day (01H to 31H)		
(S1) + 14		Upper 8 bit: Second (00H to 59H), Lower 8 bit: Minute (00H to 59H)		
(S1) + 15		Upper 8 bit: Year (00H to 99H), First 2 digits of the year Lower 8 bit: Day of the week (00H (Sun.) to 06H (Sat.))		
(S1) + 16 to (S1) + 21	File name	Specify a file name with a character string when attaching a user data file. • Specify a name (8 characters) + period + extension (3 characters) within the specified number of characters. • When omitting an extension, also omit a period (".")	String	User

Send data

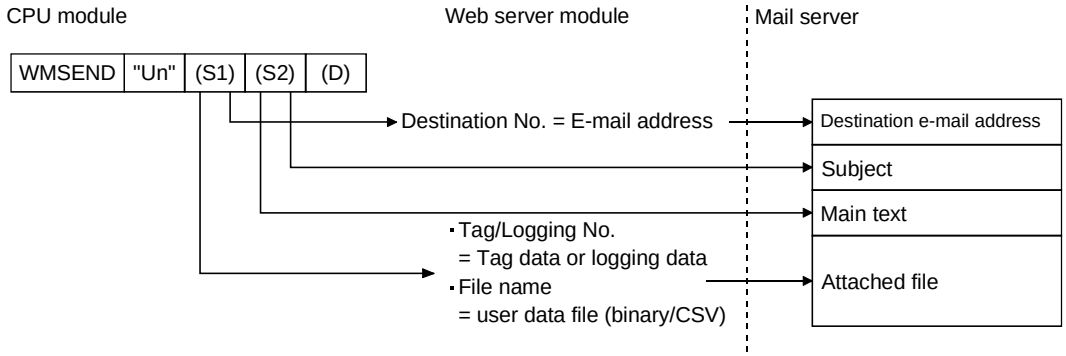
Device	Item	Setting data	Setting range	Setting side (*1)
(S2) + 0 to (S2) + n	Send data	Specify the data (subject + main text) of the e-mail to be sent.	—	User

*1 The setting side is as follows.
- User : Data are set by the user before execution of the dedicated instruction.
- System: The execution result of the dedicated instruction is stored by the PLC CPU.

*2 Refer to Section 9.3 for the error code.

Function

(1) An e-mail is sent to the destination e-mail address .



(2) Executing the same instruction during execution of the instruction is not allowed. (The second instruction will not be processed.)
In this case, even if an error is detected, the completion device ((D) + 0) and completion status indication flag ((D) + 1) do not turn on.

(3) An error may occur if the same file is concurrently accessed by WMSEND and any other instruction (FTPPUT, FTPGET, WFWRITE, WFREAD, WFDEL). Before executing instructions, provide interlocks between the dedicated instructions that will access the same file.

(4) This instruction is not available for interrupt programs.

(5) As the user data file, a file in the "/CF/USER/" directory of the Compact Flash card can be specified.

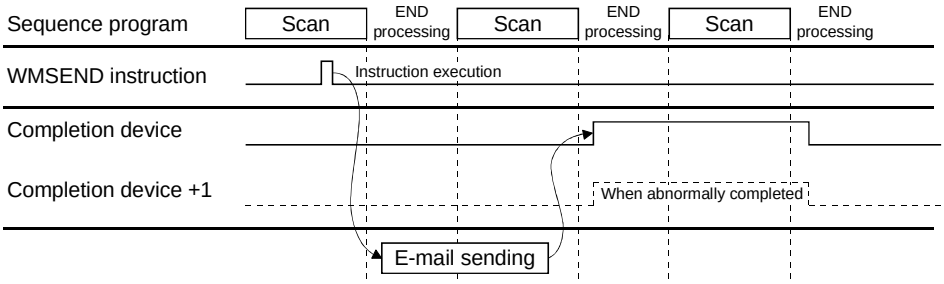
(6) The execution and normal/abnormal completion statuses of the WMSEND instruction can be confirmed using the completion device ((D) + 0) and completion status indication flag ((D) + 1).

(a) Completion device ((D) + 0)
This device turns on in the END processing of the scan for which the WMSEND instruction is completed, and turns off in the next END processing.

(b) Completion status indication flag ((D) + 1)
This device turns on/off according to the completion status of the WMSEND instruction.
Normally completed : Remains off.
Abnormally completed: Turns on in the END processing of the scan where the WMSEND instruction is completed, and turns off in the next END processing.

[Operation at execution of WMSEND instruction]

(1) When the WMSEND instruction is completed, the completion device (bit device) set in ((D) + 0) turns on in the END processing of the completed scan, and turns off in the next END processing.
When an error occurs, the completion device set in ((D) + 1) turns on and an error code is stored into the completion status (word device) set in ((S1) + 1).



(2) The name of the file attached to the e-mail sent by the WMSEND instruction is as follows.
For tag data : TAG□. CSV (□ indicates tag setting No.)
For logging data (current file): File name set in the logging setting
For logging data (saved file) : Saved file name

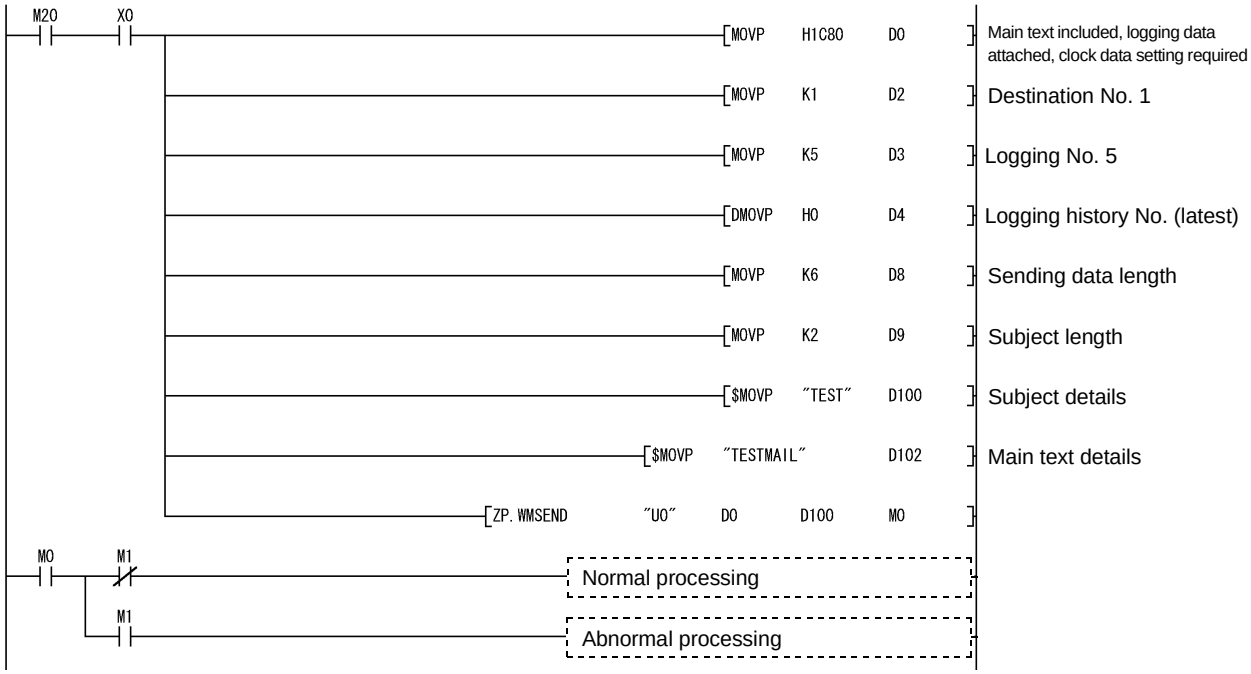
(3) When sending the logging data or user data file, do not delete the target file until its transmission is completed.
A transmission error will occur if the target data, i.e., the data to be sent, is deleted before completion of the transmission.
When deleting, execute it after the completion device ((D) + 0) has turned on.

Error

When the dedicated instruction is abnormally completed, the abnormal completion signal ((D) + 1) turns on and a corresponding error code is stored into the completion status ((S1) + 1).
Check the error status according to the error code and take corrective action.
Refer to Section 9.3 for the error code.

Program example

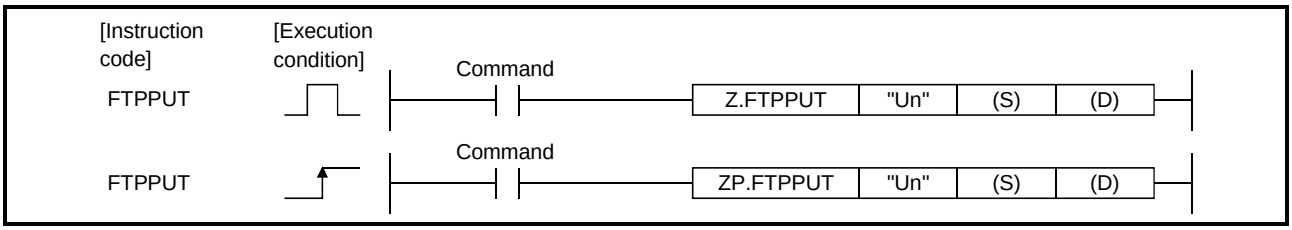
Program with which the Web server module mounted in the position of I/O numbers X/Y00 to X/Y1F sends an e-mail when M20 is turned on.



8.3 FTPPUT Instruction

A file is transferred (PUT) from the Web server module to the FTP server with this instruction.

Setting data	Applicable device									
	Internal device (System, User)		File register	MELSECNET/H, MELSECNET/10 Direct J□\□		Special module U□\G□	Index register Zn	Constant		Others
	Bit	Word		Bit	Word			K, H	$	
(S)	—	○		—				—	—	—
(D)	○	○		—				—	—	—



Setting data

Setting data	Description	Setting side (*1)	Data type
"Un"	Head I/O signal of the module (00 to FE: The first 2 digits when the I/O signal is represented in 3 digits)	User	BIN16bit
(S)	Head number of the device that stores the control data	User, System	Device name
(D)	Head number of the bit device that will be turned on for one scan when the instruction is normally completed. (D) + 1 also turns on when the instruction is abnormally completed.	System	Bit

The local devices and the file registers for individual programs do not work as the devices for the setting data.

Control data

<table>
<tr><th>Device</th><th>Item</th><th>Setting data</th><th>Setting range</th><th>Setting side (*1)</th></tr>
<tr><td>(S) + 0</td><td>Completion type/transfer form</td><td>
<table>
<tr><td>b15 ～ b11</td><td>b10 ～ b8</td><td>b7</td><td>b6 ～ b0</td></tr>
<tr><td>0</td><td>2)</td><td>1)</td><td>0</td></tr>
</table>
1) Completion type (b7)
Set whether or not the clock data will be set to (S1) + 11 to (S1) + 15 in the case of abnormal completion.
0: Not set
1: Set
2) Transfer form (b8 to b10)
Specify the transfer file type.
<table>
<tr><th>b10</th><th>b9</th><th>b8</th><th>Attached file</th></tr>
<tr><td>0</td><td>0</td><td>0</td><td>Tag data</td></tr>
<tr><td>1</td><td>0</td><td>0</td><td>Logging data</td></tr>
<tr><td>0</td><td>1</td><td>0</td><td>User data file (binary file)</td></tr>
<tr><td>0</td><td>1</td><td>1</td><td>User data file (CSV file)</td></tr>
</table>
</td><td>(As in the left)</td><td>User</td></tr>
<tr><td>(S) + 1</td><td>Completion status</td><td>The status of the instruction completion is stored.
0 : Normal completion
Other than 0 : Abnormal completion (Error code) (*2)</td><td>—</td><td>System</td></tr>
<tr><td>(S) + 2</td><td>Transfer No.</td><td>Set the transfer destination of the file with the corresponding setting No. in the FTP setting.
1 to 16: Transfer destination No.</td><td>1 to 16</td><td>User</td></tr>
<tr><td>(S) + 3</td><td>Tag/Logging No.</td><td>Set the tag data or logging data to be transferred with the corresponding No. set in the Tag setting or Logging setting.
1 to 64: Setting No. of tag data or logging data to be transferred</td><td>1 to 64</td><td>User</td></tr>
<tr><td>(S) + 4
(S) + 5</td><td>Logging history No.</td><td>Set the logging data to be transferred as a file.
0 : The current (latest) file is transferred.
1 to FFFFFFFFH : The specified saved file is transferred.
(Example) When attaching "00000010.CSV", set "00000010H".</td><td>0 to FFFFFFFFH</td><td>User</td></tr>
<tr><td>(S) + 6 to (S) + 10</td><td>System area</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td>(S) + 11</td><td>Clock set flag</td><td>Whether the clock data of (S1) + 12 to (S1) + 15 is enabled or disabled is stored.
0: Disable 1: Enable</td><td>0, 1</td><td>System</td></tr>
<tr><td>(S) + 12</td><td rowspan="4">Clock data (Set only when an error occurs)</td><td>Upper 8 bit: Month (01H to 12H), Lower 8 bit: Year (00H to 99H) Last 2 digits of the year</td><td rowspan="4">—</td><td rowspan="4">System</td></tr>
<tr><td>(S) + 13</td><td>Upper 8 bit: Hour (00H to 23H), Lower 8 bit: Day (01H to 31H)</td></tr>
<tr><td>(S) + 14</td><td>Upper 8 bit: Second (00H to 59H), Lower 8 bit: Minute (00H to 59H)</td></tr>
<tr><td>(S) + 15</td><td>Upper 8 bit: Year (00H to 99H) First 2 digits of the year
Lower 8 bit: Day of the week (00H (Sun.) to 06H (Sat.))</td></tr>
<tr><td>(S1) + 16 to (S1) + 21</td><td>File name</td><td>Specify a file name with a character string when attaching a user data file.
• Specify a name (8 characters) + period + extension (3 characters) within the specified number of characters.
• When omitting an extension, also omit a period (".").</td><td>String</td><td>User</td></tr>
</table>

Function

(1) A tag data, logging data or user data file (binary/CSV) is transferred to the specified destination FTP server.

(2) Executing the same instruction during execution of the instruction is not allowed. (The second instruction will not be processed.)
In this case, even if an error is detected, the completion device ((D) + 0) and completion status indication flag ((D) + 1) do not turn on.

(3) An error may occur if the same file is concurrently accessed by FTPPUT and any other instruction (WMSEND, FTPGET, WFWRITE, WFREAD, WFDEL). Before executing instructions, provide interlocks between the dedicated instructions that will access the same file.

(4) This instruction is not available for interrupt programs.

(5) As the user data file, a file in the "/CF/USER/" directory of the Compact Flash™ card can be specified.

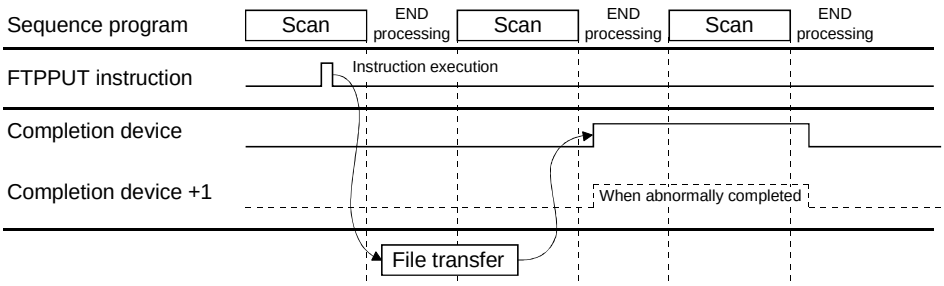
(6) The execution and normal/abnormal completion statuses of the FTPPUT instruction can be confirmed using the completion device ((D) + 0) and completion status indication flag ((D) + 1).

(a) Completion device ((D) + 0)
This device turns on in the END processing of the scan for which the FTPPUT instruction is completed, and turns off in the next END processing.

(b) Completion status indication flag ((D) + 1)
This device turns on/off according to the completion status of the FTPPUT instruction.
Normally completed : Remains off.
Abnormally completed : Turns on in the END processing of the scan where the FTPPUT instruction is completed, and turns off in the next END processing.

[Operation at execution of FTPPUT instruction]

(1) When the FTPPUT instruction is completed, the completion device (bit device) set in ((D) + 0) turns on in the END processing of the completed scan, and turns off in the next END processing.
When an error occurs, the completion device set in ((D) + 1) turns on and an error code is stored into the completion status (word device) set in ((S) + 1).



(2) The name of the file transferred by the FTPPUT instruction is as follows.
For tag data : TAG□. CSV (□ indicates tag setting No.)
For logging data (current file): File name set in the logging setting
For logging data (saved file) : Saved file name

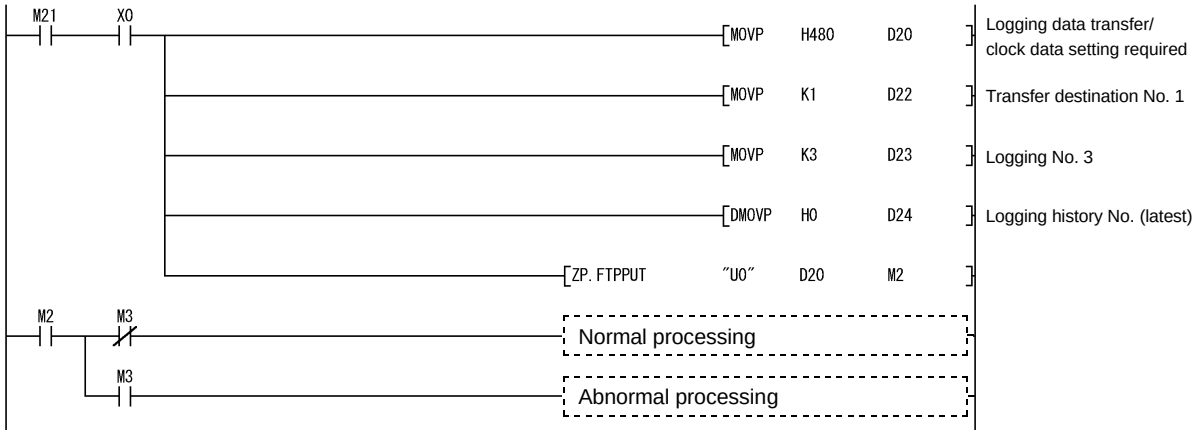
(3) When sending the logging data or user data file, do not delete the target file until its transmission is completed.
A transmission error will occur if the target data, i.e., the data to be sent, is deleted before completion of transmission.
When deleting, execute it after the completed device ((D) + 0) has turned on.

Error

When the dedicated instruction is abnormally completed, the abnormal completion signal ((D) + 1) turns on and a corresponding error code is stored into the completion status ((S) + 1).
Check the error status according to the error code and take corrective action.
Refer to Section 9.3 for the error code.

Program example

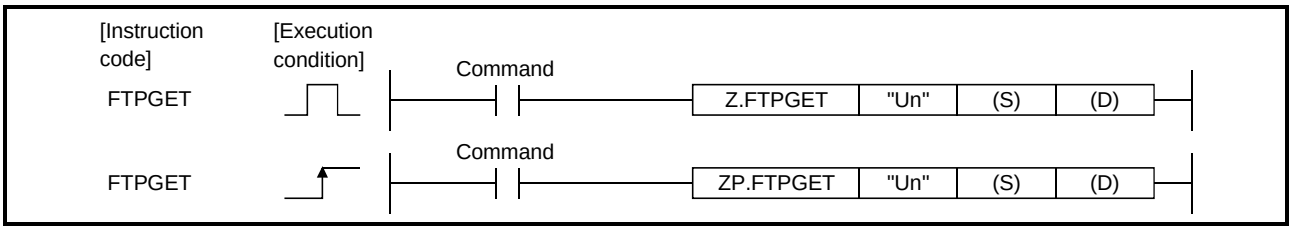
Program with which the Web server module mounted in the position of I/O numbers X/Y00 to X/Y1F transfers (PUT) logging data to the FTP server when M21 is turned on.



8.4 FTPGET Instruction

A file is transferred (GET) from the FTP server to the Web server module with this instruction.

Setting data	Applicable device									
	Internal device (System, User)		File register	MELSECNET/H, MELSECNET/10 Direct J□\□		Special module U□\G□	Index register Zn	Constant		Others
	Bit	Word		Bit	Word			K, H	$	
(S)	—	○		—				—	—	—
(D)	○	○		—				—	—	—



Setting data

Setting data	Description	Setting side(∗1)	Data type
"Un"	Head I/O signal of the module (00 to FE: The first 2 digits when the I/O signal is represented in 3 digits)	User	BIN16bit
(S)	Head number of the device that stores the control data	User, System	Device name
(D)	Head number of the bit device that will be turned on for one scan when the instruction is normally completed. (D) + 1 also turns on when the instruction is abnormally completed.	System	Bit

The local devices and the file registers for individual programs do not work as the devices for the setting data.

Control data

Device	Item	Setting data	Setting range	Setting side (*1)
(S) + 0	Completion type/transfer form	b15 ～ b9 b8 b7 b6 ～ b0 0 | 2) | 1) | 0 1) Completion type (b7) Set whether or not the clock data will be set to (S1) + 11 to (S1) + 15 in the case of abnormal completion. 0: Not set 1: Set 2) Transfer form (b8) Specify the transfer file type. 0: A user data file (binary file) is transferred. 1: A user data file (CSV file) is transferred.	(As in the left)	User
(S) + 1	Completion status	The status of the instruction completion is stored. 0 : Normal completion Other than 0 : Abnormal completion (Error code) (*2)	—	System
(S) + 2	Transfer source No.	Set the file transfer source with the setting No. of "FTP setting". 1 to 16: Transfer source No.	1 to 16	User
(S) + 3 to (S) + 10	System area	—	—	—
(S) + 11	Clock set flag	Whether the clock data of (S1) + 12 to (S1) + 15 is enabled or disabled is stored. 0: Disable 1: Enable	0, 1	System
(S) + 12	Clock data (Set only when an error occurs)	Upper 8 bit: Month (01H to 12H), Lower 8 bit: Year (00H to 99H) Last 2 digits of the year	—	System
(S) + 13		Upper 8 bit: Hour (00H to 23H), Lower 8 bit: Day (01H to 31H)		
(S) + 14		Upper 8 bit: Second (00H to 59H), Lower 8 bit: Minute (00H to 59H)		
(S) + 15		Upper 8 bit: Year (00H to 99H) First 2 digits of the year Lower 8 bit: Day of the week (00H (Sun.) to 06H (Sat.))		
(S1) + 16 to (S1) + 21	File name	Specify a file name with a character string when attaching a user data file. • Specify a name (8 characters) + period + extension (3 characters) within the specified number of characters. • When omitting an extension, also omit a period (".") .	String	User

*1 The setting side is as follows.
• User : Data are set by the user before execution of the dedicated instruction.
• System: The execution result of the dedicated instruction is stored by the PLC CPU.
*2 Refer to Section 9.3 for the error code.

Function

(1) A user data file (binary/CSV) is transferred from the specified source FTP server to the Web server module.

(2) Executing the same instruction during execution of the instruction is not allowed. (The second instruction will not be processed.)
In this case, even if an error is detected, the completion device ((D) + 0) and completion status indication flag ((D) + 1) do not turn on.

(3) An error may occur if the same file is concurrently accessed by FTPGET and any other instruction (WMSEND, FTPPUT, WFWRITE, WFREAD, WFDEL). Before executing instructions, provide interlocks between the dedicated instructions that will access the same file.

(4) This instruction is not available for interrupt programs.

(5) The file is transferred to the "/CF/USER/" directory of the Compact Flash™ card.

(6) If a file of the same file name already exists, the old file is overwritten by the new file.

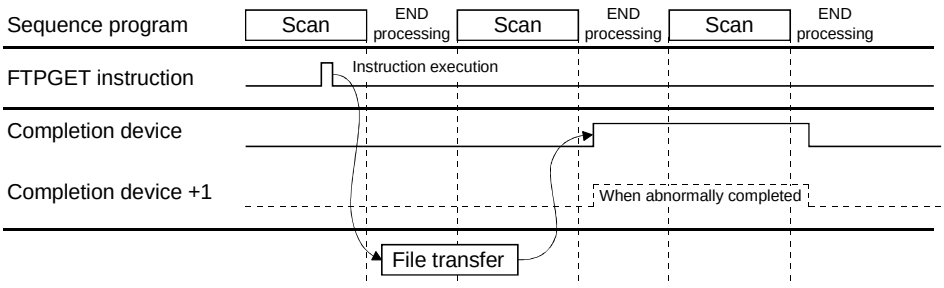
(7) The execution and normal/abnormal completion statuses of the FTPGET instruction can be confirmed using the completion device ((D) + 0) and completion status indication flag ((D) + 1).

(a) Completion device ((D) + 0)
This device turns on in the END processing of the scan for which the FTPGET instruction is completed, and turns off in the next END processing.

(b) Completion status indication flag ((D) + 1)
This device turns on/off according to the completion status of the FTPGET instruction.
Normally completed : Remains off.
Abnormally completed : Turns on in the END processing of the scan where the FTPGET instruction is completed, and turns off in the next END processing.

[Operation at execution of FTPGET instruction]

When the FTPGET instruction is completed, the completion device (bit device) set in ((D) + 0) turns on in the END processing of the completed scan, and turns off in the next END processing.
When an error occurs, the completion device set in ((D) + 1) turns on and an error code is stored into the completion status (word device) set in ((S) + 1).



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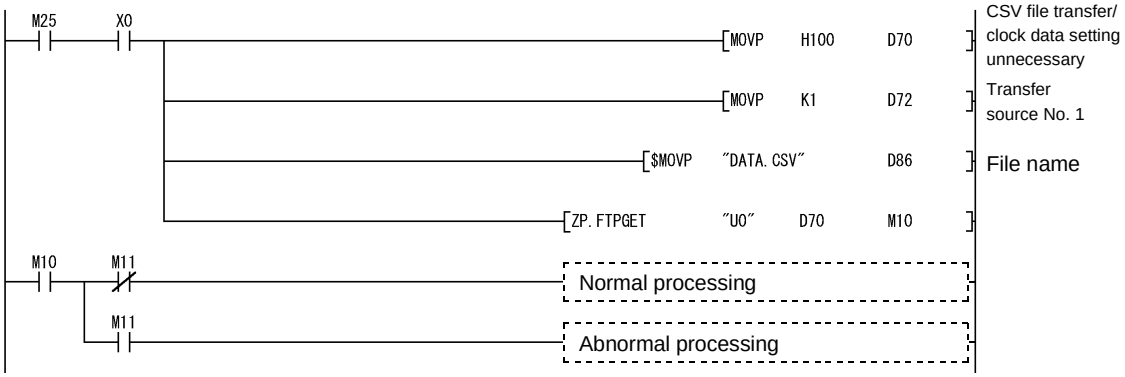
Error

When the dedicated instruction is abnormally completed, the abnormal completion signal ((D) + 1) turns on and a corresponding error code is stored into the completion status ((S) + 1).
Check the error status according to the error code and take corrective action.
Refer to Section 9.3 for the error code.

Program example

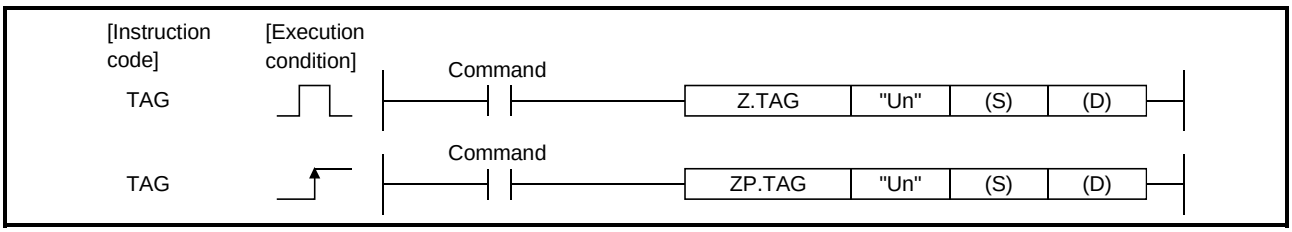
Program with which the Web server module mounted in the position of I/O numbers X/Y00 to X/Y1F transfers (GET) a user data file "DATA.CSV" from the FTP server when M25 is turned on.



8.5 TAG Instruction

A tag collection command is issued with this command. (A tag collection is triggered.)

Setting data	Applicable device									
	Internal device (System, User)		File register	MELSECNET/H, MELSECNET/10 Direct J□\□		Special module U□\G□	Index register Zn	Constant		Others
	Bit	Word		Bit	Word			K, H	$	
(S)	_	○		_				_	_	_
(D)	○	○		_				_	_	_



Setting data

Setting data	Description	Setting side(∗1)	Data type
"Un"	Head I/O signal of the module (00 to FE: The first 2 digits when the I/O signal is represented in 3 digits)	User	BIN16bit
(S)	Head number of the device that stores the control data	User, System	Device name
(D)	Head number of the bit device that will be turned on for one scan when the instruction is normally completed. (D) + 1 also turns on when the instruction is abnormally completed.	System	Bit

The local devices and the file registers for individual programs do not work as the devices for the setting data.

Control data

<table>
<tr><th>Device</th><th>Item</th><th>Setting data</th><th>Setting range</th><th>Setting side (*1)</th></tr>
<tr><td>(S) + 0</td><td>System area</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td>(S) + 1</td><td>Completion status</td><td>The status of the instruction completion is stored.
0 : Normal completion
Other than 0 : Abnormal completion (Error code) (*2)</td><td>—</td><td>System</td></tr>
<tr><td>(S) + 2
to
(S) + 5</td><td>Tag specification</td><td>Turn on the bit corresponding to the No. of which tag data will be collected by the TAG instruction.
0: Tag data are not collected.
1: Tag data are collected by the TAG instruction.
Tag setting No.
((S)+2)
b15 b14 b13 b12 b11 b10 b9 b8 b7 b6 b5 b4 b3 b2 b1 b0
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
((S)+3)
b15 b14 b13 b12 b11 b10 b9 b8 b7 b6 b5 b4 b3 b2 b1 b0
32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17
((S)+4)
b15 b14 b13 b12 b11 b10 b9 b8 b7 b6 b5 b4 b3 b2 b1 b0
48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33
((S)+5)
b15 b14 b13 b12 b11 b10 b9 b8 b7 b6 b5 b4 b3 b2 b1 b0
64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49</td><td>0, 1</td><td>User</td></tr>
</table>

*1 The setting side is as follows.
- User : Data are set by the user before execution of the dedicated instruction.
- System: The execution result of the dedicated instruction is stored by the PLC CPU.

*2 Refer to Section 9.3 for the error code.

Function

(1) The command is issued to the specified tag to collect data (refresh).

(2) Regardless of the "Sampling" setting in the tag setting, the tag data of the No. set in (S) + 2 to (S) + 5 are collected.
However, the tag set to "Execute at high speed" cannot be specified.
An error will occur if the high speed sampling tag is specified.

(3) Executing the same instruction during execution of the instruction is not allowed. (The second instruction will not be processed.)
In this case, even if an error is detected, the completion device ((D) + 0) and completion status indication flag ((D) + 1) do not turn on.

(4) This instruction is not available for interrupt programs.

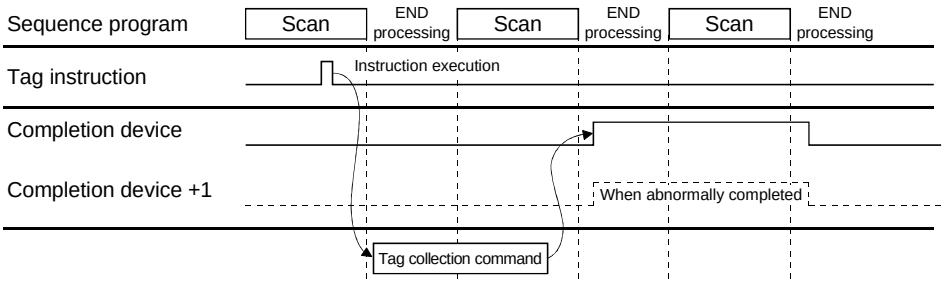
(5) The execution and normal/abnormal completion statuses of the TAG instruction can be confirmed using the completion device ((D) + 0) and completion status indication flag ((D) + 1).

(a) Completion device ((D) + 0)
This device turns on in the END processing of the scan for which the TAG instruction is completed, and turns off in the next END processing.

(b) Completion status indication flag ((D) + 1)
This device turns on/off according to the completion status of the TAG instruction.
Normally completed : Remains off.
Abnormally completed : Turns on in the END processing of the scan where the TAG instruction is completed, and turns off in the next END processing.

[Operation at execution of TAG instruction]

When the TAG instruction is completion, the completion device (bit device) set in ((D) + 0) turns on in the END processing of the completed scan, and turns off in the next END processing.
When an error occurs, the completion device set in ((D) + 1) turns on and an error code is stored into the completion status (word device) set in ((S) + 1).

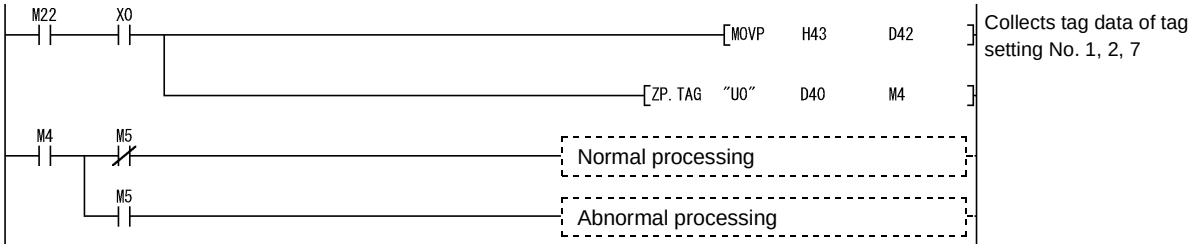


Error

When the dedicated instruction is abnormally completed, the abnormal completion signal ((D) + 1) turns on and a corresponding error code is stored into the completion status ((S) + 1).
Check the error status according to the error code and take corrective action.
Refer to Section 9.3 for the error code.

Program example

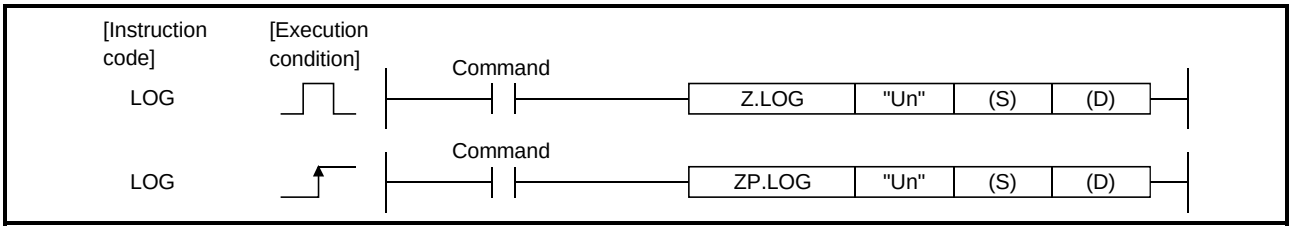
Program with which the Web server module mounted in the position of I/O numbers X/Y00 to X/Y1F collects the data of the tags set in (S)+2 to (S)+5 when M22 is turned on.



8.6 LOG Instruction

A logging command is issued with this command. (A logging is triggered.)

Setting data	Applicable device									
	Internal device (System, User)		File register	MELSECNET/H, MELSECNET/10 Direct J□\□		Special module U□\G□	Index register Zn	Constant		Others
	Bit	Word		Bit	Word			K, H	$	
(S)	_	○		_				_	_	_
(D)	○	○		_				_	_	_



Setting data

Setting data	Description	Setting side(∗1)	Data type
"Un"	Head I/O signal of the module (00 to FE: The first 2 digits when the I/O signal is represented in 3 digits)	User	BIN16bit
(S)	Head number of the device that stores the control data	User, System	Device name
(D)	Head number of the bit device that will be turned on for one scan when the instruction is normally completed. (D) + 1 also turns on when the instruction is abnormally completed.	System	Bit

The local devices and the file registers for individual programs do not work as the devices for the setting data.

Control data

Device	Item	Setting data	Setting range	Setting side (*1)
(S) + 0	System area	—	—	—
(S) + 1	Completion status	The status of the instruction completion is stored. 0 : Normal completion Other than 0 : Abnormal completion (Error code) (*2)	—	System
(S) + 2 to (S) + 5	Logging specification	Turn on the bit corresponding to the No. for which logging will be performed by the LOG instruction. 0: Logging is not performed. 1: Logging is performed by the LOG instruction. Logging setting No. ((S)+2) b15 b14 b13 b12 b11 b10 b9 b8 b7 b6 b5 b4 b3 b2 b1 b0 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 ((S)+3) b15 b14 b13 b12 b11 b10 b9 b8 b7 b6 b5 b4 b3 b2 b1 b0 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 ((S)+4) b15 b14 b13 b12 b11 b10 b9 b8 b7 b6 b5 b4 b3 b2 b1 b0 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 ((S)+5) b15 b14 b13 b12 b11 b10 b9 b8 b7 b6 b5 b4 b3 b2 b1 b0 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49	0, 1	User

*1 The setting side is as follows.
- User : Data are set by the user before execution of the dedicated instruction.
- System: The execution result of the dedicated instruction is stored by the PLC CPU.

*2 Refer to Section 9.3 for the error code.

Function

(1) A command is issued to the logging setting to perform one-record logging.

(2) Regardless of the "Schedule setting" in the logging setting, one-record loggings of the setting No. set in (S) + 2 to (S) + 5 are performed.
However, high speed logging cannot be specified.
An error will occur if high-speed logging is specified.

(3) Executing the same instruction during execution of the instruction is not allowed. (The second instruction will not be processed.)
In this case, even if an error is detected, the completion device ((D) + 0) and completion status indication flag ((D) + 1) do not turn on.

(4) This instruction is not available for interrupt programs.

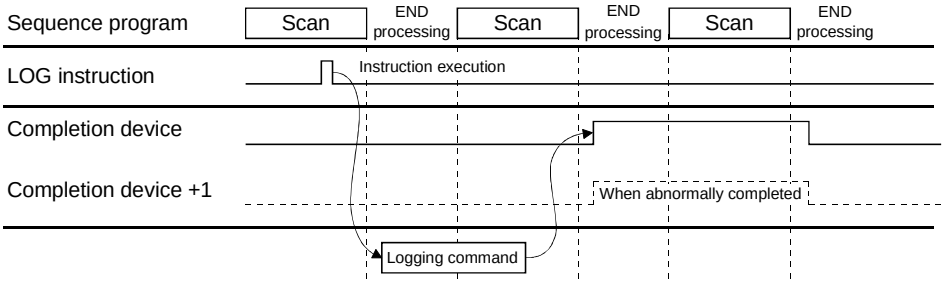
(5) The execution and normal/abnormal completion statuses of the LOG instruction can be confirmed using the completion device ((D) + 0) and completion status indication flag ((D) + 1).

(a) Completion device ((D) + 0)
This device turns on in the END processing of the scan for which the LOG instruction is completed, and turns off in the next END processing.

(b) Completion status indication flag ((D) + 1)
This device turns on/off according to the completion status of the LOG instruction.
Normally completed : Remains off.
Abnormally completed : Turns on in the END processing of the scan where the LOG instruction is completed, and turns off in the next END processing.

[Operation at execution of LOG instruction]

When the LOG instruction is completed, the completion device (bit device) set in ((D) + 0) turns on in the END processing of the completed scan, and turns off in the next END processing.
When an error occurs, the completion device set in ((D) + 1) turns on and an error code is stored into the completion status (word device) set in ((S) + 1).

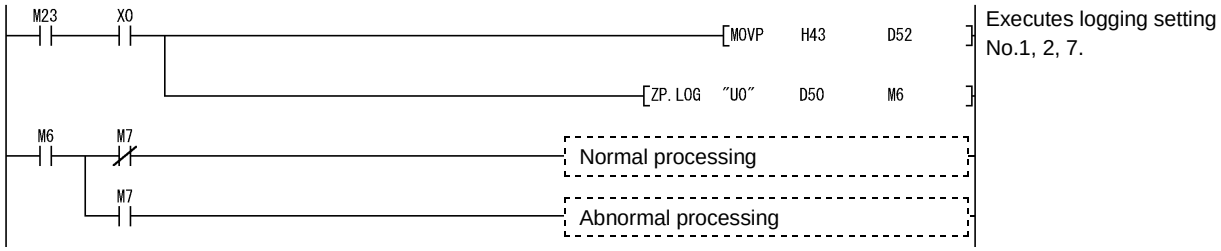


Error

When the dedicated instruction is abnormally completed, the abnormal completion signal ((D)+1) turns on and a corresponding error code is stored into the completion status ((S)+1).
Check the error status according to the error code and take corrective action.
Refer to Section 9.3 for the error code.

Program example

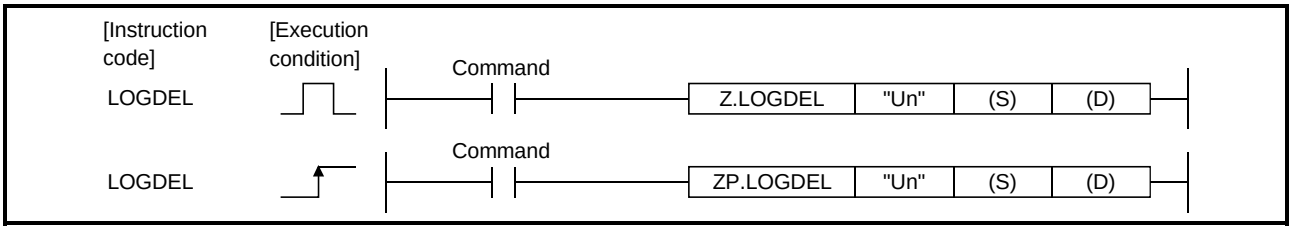
Program with which the Web server module mounted in the position of I/O numbers X/Y00 to X/Y1F logs one record of the logging data set in (S)+2 to (S)+5 when M23 is turned on.



8.7 LOGDEL Instruction

The saved file of logging data is deleted with this instruction.

Setting data	Applicable device									
	Internal device (System, User)		File register	MELSECNET/H, MELSECNET/10 Direct J□\□		Special module U□\G□	Index register Zn	Constant		Others
	Bit	Word		Bit	Word			K, H	$	
(S)	—	○		—				—	—	—
(D)	○	○		—				—	—	—



Setting data

Setting data	Description	Setting side(∗1)	Data type
"Un"	Head I/O signal of the module (00 to FE: The first 2 digits when the I/O signal is represented in 3 digits)	User	BIN16bit
(S)	Head number of the device that stores the control data	User, System	Device name
(D)	Head number of the bit device that will be turned on for one scan when the instruction is normally completed. (D) + 1 also turns on when the instruction is abnormally completed.	System	Bit

The local devices and the file registers for individual programs do not work as the devices for the setting data.

Control data

Device	Item	Setting data	Setting range	Setting side (*1)
(S) + 0	Execution type	Set the execution type. (b8) 0: Deletes one saved file of logging data according to the setting made in (S) + 3 to (S) + 4. 1: Deletes all saved files of logging data according to the setting made in (S) + 3 to (S) + 4.	(As in the left)	User
(S) + 1	Completion status	The status of the instruction completion is stored. 0 : Normal completion Other than 0 : Abnormal completion (Error code) (*2)	—	System
(S) + 2	Logging No.	Set the logging data to be deleted with the corresponding No. set in the logging setting. 1 to 64: Setting No. of logging data to be deleted	1 to 64	User
(S) + 3 (S) + 4	Saved file No.	Set the saved logging data file to be deleted. 0 : The oldest file is deleted. 1 to FFFFFFFFH : The specified saved file is deleted. (Example) When deleting "00000010.CSV", set "00000010H".	0 to FFFFFFFFH	User

*1 The setting side is as follows.
- User : Data are set by the user before execution of the dedicated instruction.
- System: The execution result of the dedicated instruction is stored by the PLC CPU.

*2 Refer to Section 9.3 for the error code.

Function

(1) The saved file of the logging data is deleted.

(2) Executing the same instruction during execution of the instruction is not allowed. (The second instruction will not be processed.)
In this case, if an error is detected, the completion device ((D) + 0) and completion status indication flag ((D) + 1) do not turn on.

(3) This instruction is not available for interrupt programs.

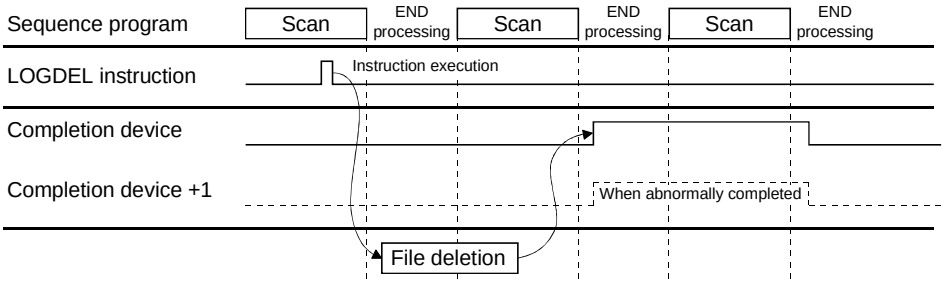
(4) The execution and normal/abnormal completion statuses of the LOGDEL instruction can be confirmed using the completion device ((D) + 0) and completion status indication flag ((D) + 1).

(a) Completion device ((D) + 0)
This device turns on in the END processing of the scan for which the LOGDEL instruction is completed, and turns off in the next END processing.

(b) Completion status indication flag ((D) + 1)
This device turns on/off according to the completion status of the LOGDEL instruction.
Normally completed : Remains off.
Abnormally completed : Turns on in the END processing of the scan where the LOGDEL instruction is completed, and turns off in the next END processing.

[Operation at execution of LOGDEL instruction]

When the LOGDEL instruction is completed, the completion device (bit device) set in ((D) + 0) turns on in the END processing of the completed scan, and turns off in the next END processing.
When an error occurs, the completion device set in ((D) + 1) turns on and the error code is stored into the completion status (word device) set in ((S) + 1).

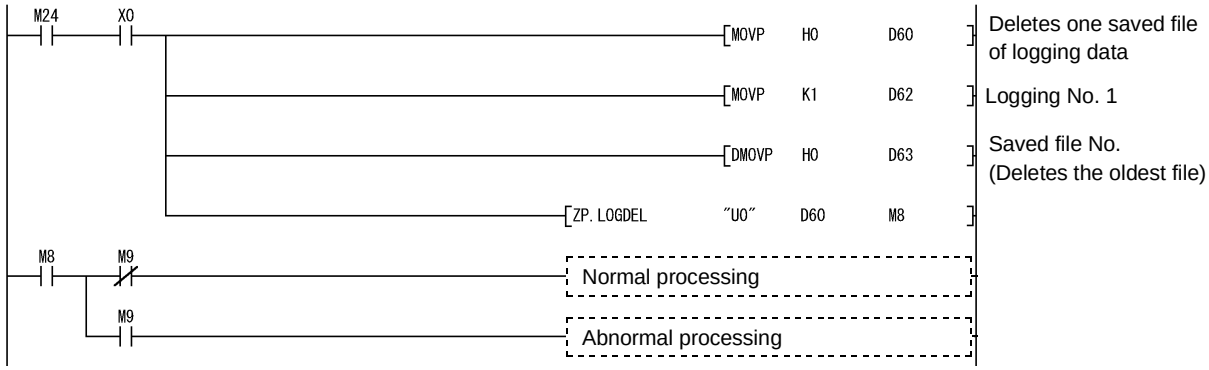


Error

When the dedicated instruction is abnormally completed, the abnormal completion signal ((D) + 1) turns on and an error code is stored into the completion status ((S) + 1).
Check the error status according to the error code and take corrective action.
Refer to Section 9.3 for the error code.

Program example

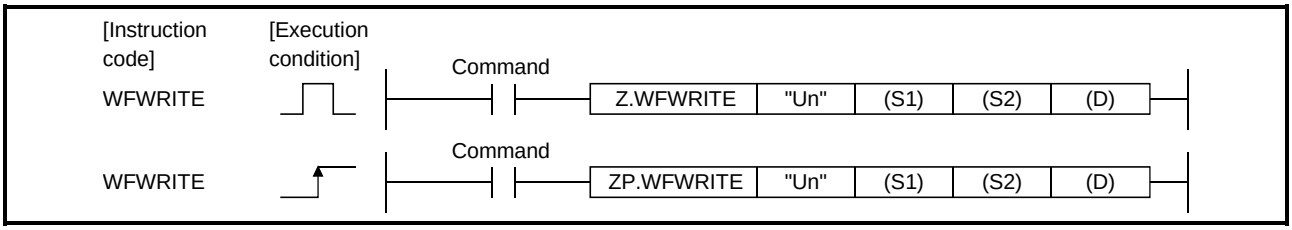
Program with which the Web server module mounted in the position of I/O numbers X/Y00 to X/Y1F deletes the saved file of the logging data when M24 is turned on.



8.8 WFWRITE Instruction

The device data of the PLC CPU are written to the user data file of the Compact Flash™ card.

Setting data	Applicable device									
	Internal device (System, User)		File register	MELSECNET/H, MELSECNET/10 Direct J□\□		Special module U□\G□	Index register Zn	Constant		Others
	Bit	Word		Bit	Word			K, H	$	
(S1)	—	○		—				—	—	—
(S2)	—	○		—				—	—	—
(D)	○	○		—				—	—	—



Setting data

Setting data	Description	Setting side(∗1)	Data type
"Un"	Head I/O signal of the module (00 to FE: The first 2 digits when the I/O signal is represented in 3 digits)	User	BIN16bit
(S1)	Head number of the device that stores the control data	User, System	Device name
(S2)	Head number of the device that stores the data	User	
(D)	Head number of the bit device that will be turned on for one scan when the instruction is normally completed. (D)+ 1 also turns on when the instruction is abnormally completed.	System	Bit

The local devices and the file registers for individual programs do not work as the devices for the setting data.

Control data

Device	Item	Setting data	Setting range	Setting side (*1)
(S1) + 0	Execution type	Specify the execution type. 0000H : Binary write 0100H : CSV format conversion write	0000H 0100H	User
(S1) + 1	Completion status	The status of the instruction completion is stored. 0 : Normal completion Other than 0 : Abnormal completion (Error code)(*2)	—	System
(S1) + 2	Number of data to be written	Specify the number of data to be written. (Word unit) When specifying the byte unit in (S1)+7, also set the number of data in word units by converting it into word units.	1 to 480	User
(S1) + 3	Write result (Number of data)	With respect to the data specified in (S2), the number of actually written data enters here. • The unit depends on the word/byte specification.	—	System
(S1) + 4 (S1) + 5	File position	Set the file position where data will be written. • When binary write is specified in (S1)+0 00000000H : Written to the file, starting at its beginning. 00000001H to FFFFFFFEH : Written to the file, starting at the specified position. The unit depends on the word/byte specification. FFFFFFFFH : Added to the end of the file. • When CSV format conversion write is specified in (S1)+0 00000000H to FFFFFFFEH : Written to the file, starting at its beginning. FFFFFFFFH : Added to the end of the file.	0 to FFFFFFFFH	User
(S1) + 6	Number of columns specification	• When binary write is specified in (S1)+0 Always specify "0". • When CSV format conversion write is specified in (S1)+0 Specify the number of columns where data will be written. 0 : Number of columns not specified. Written to 1 row. Other than 0 : Written to the specified number of columns.	0 to 65535	User
(S1) + 7	Word/byte specification	Specify the word or byte unit. 0 : Word 1 : Byte	0, 1	User
(S1) + 8 to (S1) + 13	File name	Specify a file name with a character string. • Specify a name (8 characters) + period + extension (3 characters) within the specified number of characters. • When omitting an extension, also omit a period (".") .	String	User

Send data

Device	Item	Setting data	Setting range	Setting side (*1)
(S2) + 0 to (S2) + n	Written data	Specify the data to be written.	0 to FFFFH	User

*1 The setting side is as follows.
• User : Data are set by the user before execution of the dedicated instruction.
• System: The execution result of the dedicated instruction is stored by the PLC CPU.
*2 Refer to Section 9.3 for the error code.

Function

(1) The device data of the PLC CPU are written to the user data file of the Compact Flash card in binary or CSV format.

(2) Executing the same instruction during execution of the instruction is not allowed. (The second instruction will not be processed.)
In this case, even if an error is detected, the completion device ((D) + 0) and completion status indication flag ((D) + 1) do not turn on.

(3) An error may occur if the same file is accessed by WFWRITE and any other instruction (WMSEND, FTPPUT, FTPGET, WFREAD, WFDEL).
Before executing instructions, provide interlocks between the dedicated instructions that will access the same file.

(4) This instruction is not available for interrupt programs.

(5) As the user data file, a file in the "/CF/USER/" directory of the Compact Flash™ card can be specified.

(6) The execution and normal/abnormal completion statuses of the WFWRITE instruction can be confirmed using the completion device ((D) + 0) and completion status indication flag ((D) + 1).
(a) Completion device ((D) + 0)
This device turns on in the END processing of the scan for which the WFWRITE instruction is completed, and turns off in the next END processing.

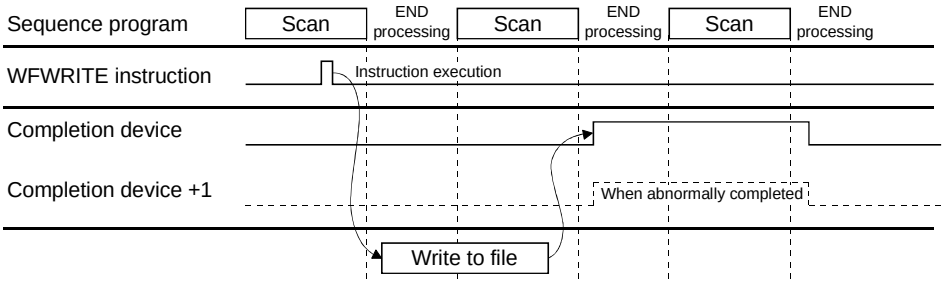
(b) Completion status indication flag ((D) + 1)
This device turns on/off according to the completion status of the WFWRITE instruction.
Normally completed : Remains off.
Abnormally completed: Turns on in the END processing of the scan where the WFWRITE instruction is completed, and turns off in the next END processing.

Precaution

(1) The data written at the CSV setting are decimal values.
When word is specified: -32768 to 32767
When byte is specified: -128 to 127

[Operation at execution of WFWRITE instruction]

(1) When the WFWRITE instruction is completed, the completion device (bit device) set in ((D) + 0) turns on in the END processing of the completed scan, and turns off in the next END processing.
When an error occurs, the completion device set in ((D) + 1) turns on and an error code is stored into the completion status (word device) set in ((S1) + 1).



(2) An error will occur if the Compact Flash™ card runs out of a free area during data write to the file. The data already written to the file before error occurrence remain in the Compact Flash card.

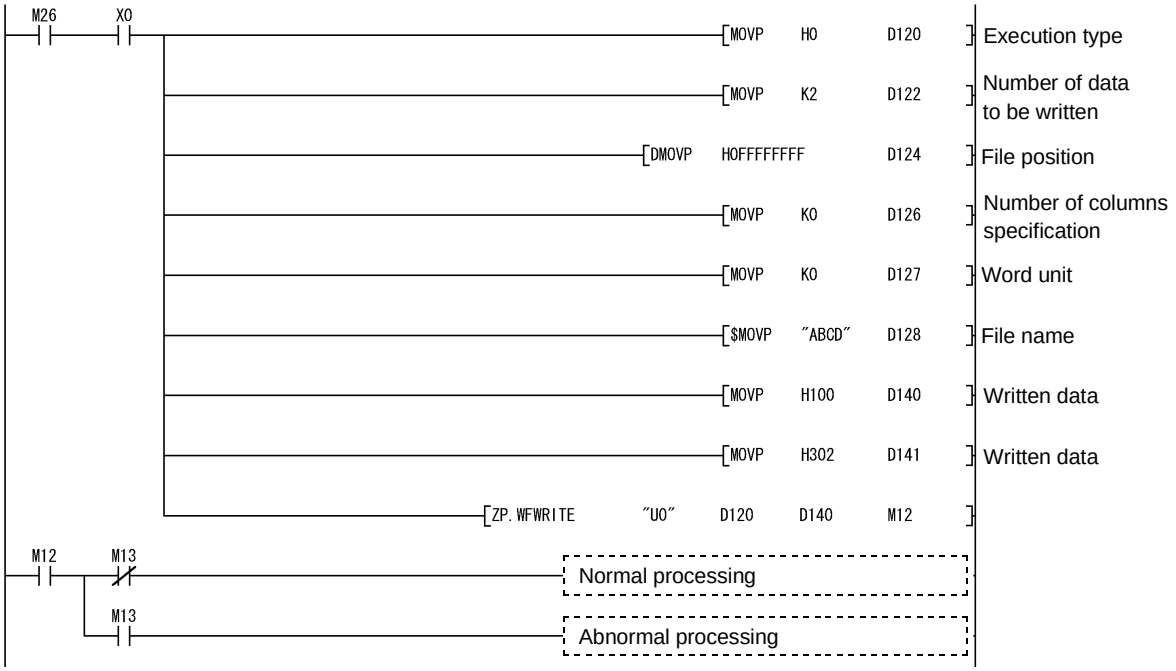
(3) When data are written in binary and the specified file position of data write is beyond the existing file position, the write is completed normally with no data written.
"0" is stored into the write result ((S1)+3).

Error

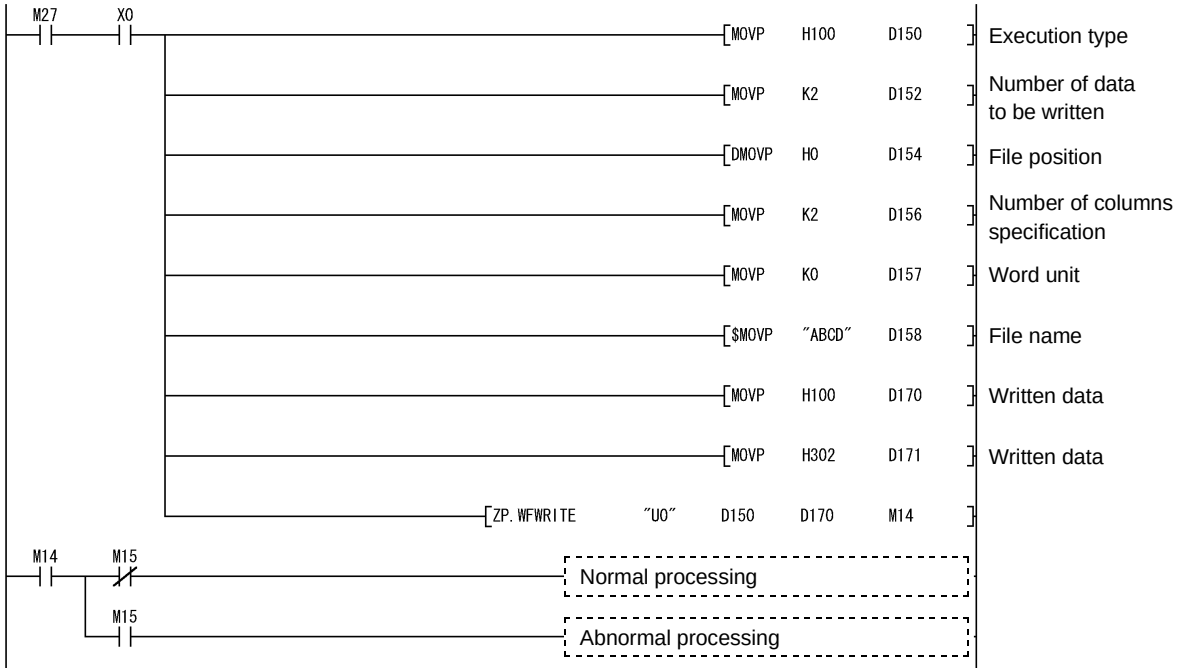
When the dedicated instruction is abnormally completed, the abnormal completion signal ((D) + 1) turns on and a corresponding error code is stored into the completion status ((S1) + 1).
Check the error status according to the error code and take corrective action.
Refer to Section 9.3 for the error code.

Program example

(1) Program with which the Web server module mounted in the position of I/O numbers X/Y00 to X/Y1F adds 2-word binary data, 0100H and 0302H, to "ABCD.BIN" in the "/CF/USER/" directory when M26 is turned on.



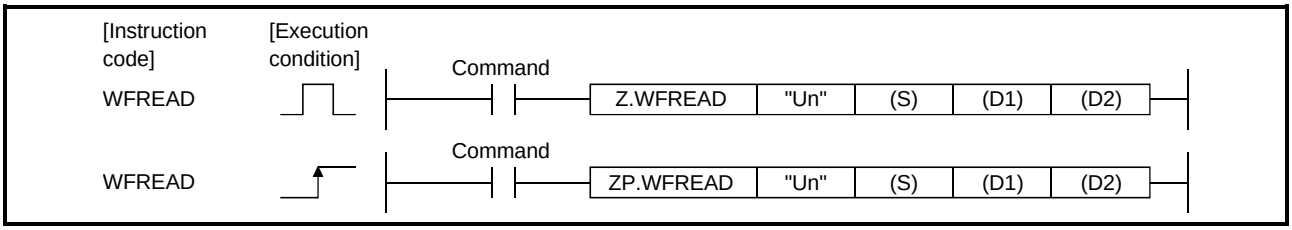
(2) Program with which the Web server module mounted in the position of I/O numbers X/Y00 to X/Y1F creates 2-word data, 0100H and 0302H, as a 2-column CSV format file with a file name "ABCD.CSV" in the "/CF/USER/" directory when M27 is turned on.



8.9 WFREAD Instruction

The user data file of the Compact Flash™ card is read to the device data of the PLC CPU.

Setting data	Applicable device									
	Internal device (System, User)		File register	MELSECNET/H, MELSECNET/10 Direct J□\□		Special module U□\G□	Index register Zn	Constant		Others
	Bit	Word		Bit	Word			K, H	$	
(S)	—	○		—				—	—	—
(D1)	—	○		—				—	—	—
(D2)	○	○		—				—	—	—



Setting data

Setting data	Description	Setting side(∗1)	Data type
"Un"	Head I/O signal of the module (00 to FE: The first 2 digits when the I/O signal is represented in 3 digits)	User	BIN16bit
(S)	Head number of the device that stores the control data	User, System	Device name
(D1)	Head number of the device that stores the data	User	
(D2)	Head number of the bit device that will be turned on for one scan when the instruction is normally completed. (D)+ 1 also turns on when the instruction is abnormally completed.	System	Bit

The local devices and the file registers for individual programs do not work as the devices for the setting data.

Control data

Device	Item	Setting data	Setting range	Setting side (*1)
(S) + 0	Execution type	Specify the execution type. 0000H : Binary read 0100H : CSV format conversion reads	0000H 0100H	User
(S) + 1	Completion status	The status of the instruction completion is stored. 0 : Normal completion Other than 0 : Abnormal completion (Error code)(*2)	—	System
(S) + 2	Number of data to be read	Specify the number of data to be read. (Word unit) When specifying the byte unit in (S1)+7, also set the number of data in word units by converting it into word units.	1 to 480	User
(S) + 3	Read result (Number of data)	With respect to the data specified in (S2)+2, the number of actually read data enters here. • The unit depends on the word/byte specification.	—	System
(S) + 4 (S) + 5	File position	Set the file position from where data will be read. • When binary read is specified in (S)+0 00000000H : Read from the beginning of the file. 00000001H to FFFFFFFEH : Read from the specified position of the file. The unit depends on the word/byte specification. FFFFFFFFH : Cannot be set. • When CSV format conversion read is specified in (S)+0 00000000H to FFFFFFFEH : Read from the specified row of the file. FFFFFFFFH : Read continuously from the previous position.	0 to FFFFFFFEH / FFFFFFFEH	User
(S) + 6	Number of columns specification	• When binary read is specified in (S)+0 Always specify "0". • When CSV format conversion read is specified in (S)+0 Specify the number of columns from which data will be read. 0 : Number of columns not specified. Written to 1 row. Other than 0 : Written to the specified number of columns.	0 to 65535	User
(S) + 7	Word/byte specification	Specify the word or byte unit. 0 : Word 1 : Byte	0, 1	User
(S) + 8 to (S) + 13	File name	Specify a file name with a character string. • Specify a name (8 characters) + period + extension (3 characters) within the specified number of characters. • When omitting an extension, also omit a period (".") .	String	User

Read data

Device	Item	Setting data	Setting range	Setting side (*1)
(D1) + 0 to (D1) + n	Read data	The read data are stored.	—	System

*1 The setting side is as follows.
• User : Data are set by the user before execution of the dedicated instruction.
• System: The execution result of the dedicated instruction is stored by the PLC CPU.
*2 Refer to Section 9.3 for the error code.

Function

(1) The user data file of the Compact Flash™ card are read to the device data of the PLC CPU in binary or CSV format.

(2) Executing the same instruction during execution of the instruction is not allowed. (The second instruction will not be processed.)
In this case, even if an error is detected, the completion device ((D2) + 0) and completion status indication flag ((D2) + 1) do not turn on.

(3) An error may occur if the same file is concurrently accessed by WFREAD and any other instruction (WMSEND, FTPPUT, FTPGET, WFWRITE, WFDEL). Before executing instructions, provide interlocks between the dedicated instructions that will access the same file.

(4) This instruction is not available for interrupt programs.

(5) As the user data file, a file in the "/CF/USER/" directory of the Compact Flash™ card can be specified.

(6) The execution and normal/abnormal completion statuses of the WFREAD instruction can be confirmed using the completion device ((D) + 0) and completion status indication flag ((D) + 1).
(a) Completion device ((D) + 0)
This device turns on in the END processing of the scan for which the WFREAD instruction is completed, and turns off in the next END processing.

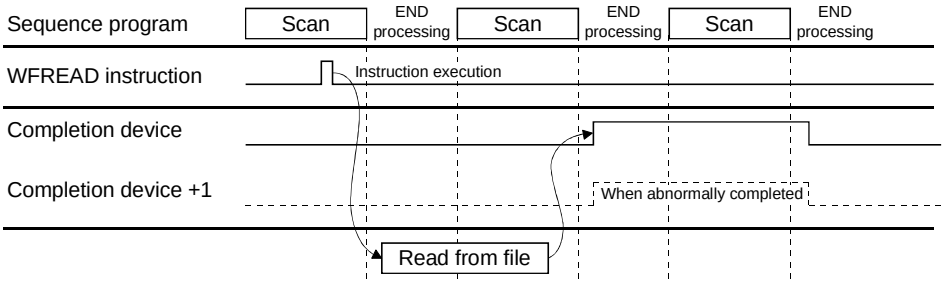
(b) Completion status indication flag ((D) + 1)
This device turns on/off according to the completion status of the WFREAD instruction.
Normally completed : Remains off.
Abnormally completed: Turns on in the END processing of the scan where the WFREAD instruction is completed, and turns off in the next END processing.

Precaution

(1) The data read at the CSV setting are decimal values.
When word is specified: -32768 to 32767, 0 to 65535
When byte is specified: -128 to 127, 0 to 255
Any value outside the above range (including characters other than numeric characters) is converted into 0.

[Operation at execution of WFREAD instruction]

When the WFREAD instruction is completed, the completion device (bit device) set in ((D2) + 0) turns on in the END processing of the completed scan, and turns off in the next END processing.
When an error occurs, the completion device set in ((D2) + 1) turns on and an error code is stored into the completion status (word device) set in ((S) + 1).

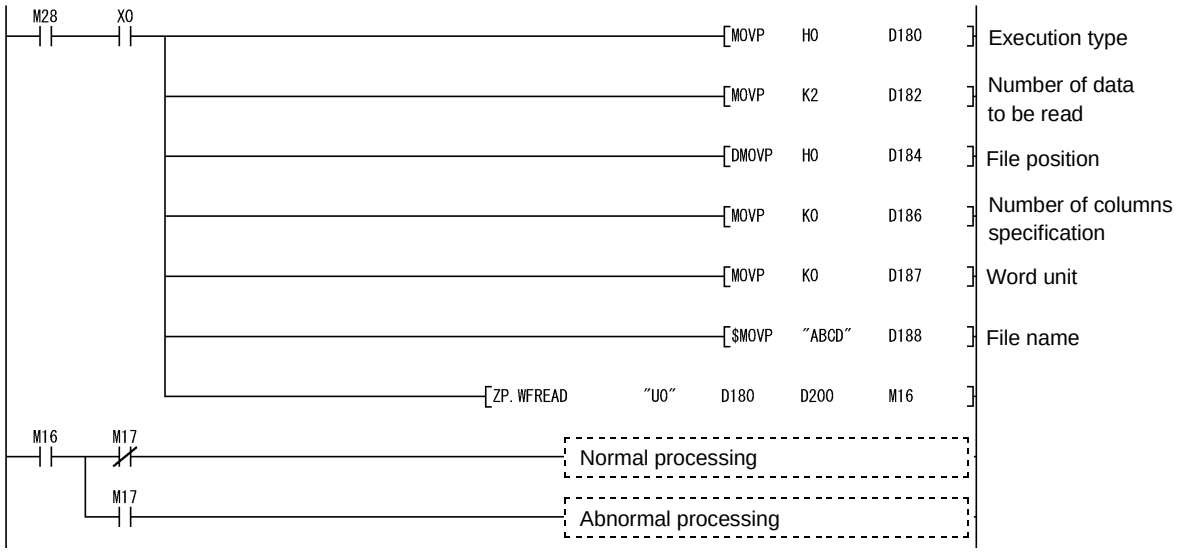


Error

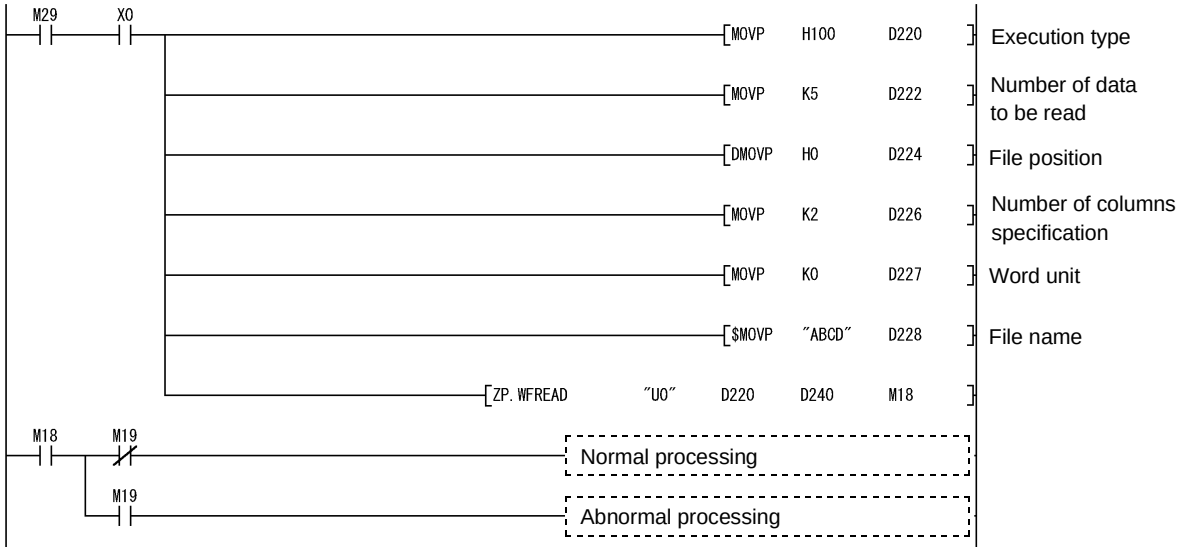
When the dedicated instruction is abnormally completed, the abnormal completion signal ((D2) + 1) turns on and a corresponding error code is stored into the completion status ((S) + 1).
Check the error status according to the error code and take corrective action.
Refer to Section 9.3 for the error code.

Program example

(1) Program with which the Web server module mounted in the position of I/O numbers X/Y00 to X/Y1F reads 2 words as binary data from the beginning of the "ABCD.BIN" file in the "/CF/USER/" directory when M28 is turned on.



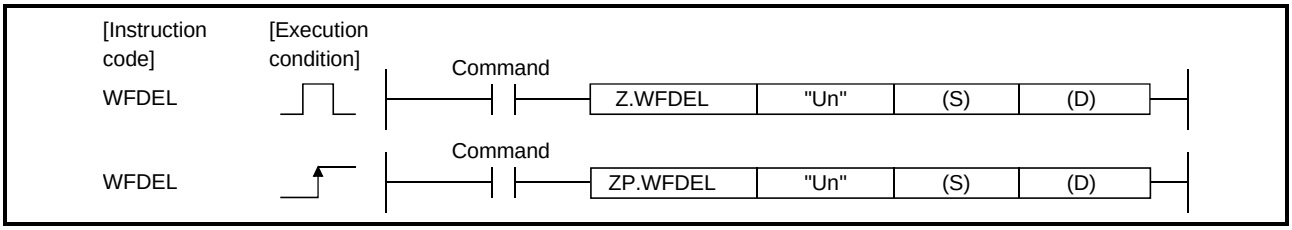
(2) Program with which the Web server module mounted in the position of I/O numbers X/Y00 to X/Y1F reads the "ABCD.CSV" file in the "/CF/USER/" directory as a 2-column CSV format file when M29 is turned on.



8.10 WFDEL Instruction

The user data file of the Compact Flash™ card is deleted with this instruction.

Setting data	Applicable device								
	Internal device (System, User)		File register	MELSECNET/H, MELSECNET/10 Direct J□\□		Special module U□\G□	Index register Zn	Constant		Others
	Bit	Word		Bit	Word			K, H	$	
(S)	—	○		—				—	—	—
(D)	○	○		—				—	—	—



Setting data

Setting data	Description	Setting side(∗1)	Data type
"Un"	Head I/O signal of the module (00 to FE: The first 2 digits when the I/O signal is represented in 3 digits)	User	BIN16bit
(S)	Head number of the device that stores the control data	User, System	Device name
(D)	Head number of the bit device that will be turned on for one scan when the instruction is normally completed. (D)+ 1 also turns on when the instruction is abnormally completed.	System	Bit

The local devices and the file registers for individual programs do not work as the devices for the setting data.

Control data

Device	Item	Setting data	Setting range	Setting side (∗1)
(S) + 0	Execution type	Specify the execution type. 0000H : Binary file 0100H : CSV format file	0000H 0100H	User
(S) + 1	Completion status	The status of the instruction completion is stored. 0 : Normal completion Other than 0 : Abnormal completion (Error code)(∗2)	—	System
(S) + 2 to (S) + 7	System area	—	—	System
(S) + 8 to (S) + 13	File name	Specify a file name with a character string. • Specify a name (8 characters) + period + extension (3 characters) within the specified number of characters. • When omitting an extension, also omit a period (".") .	String	User

∗1 The setting side is as follows.
• User : Data are set by the user before execution of the dedicated instruction.
• System: The execution result of the dedicated instruction is stored by the PLC CPU.
∗2 Refer to Section 9.3 for the error code.

Function

(1) The user data file of the Compact Flash™ card is deleted.

(2) Executing the same instruction during execution of the instruction is not allowed. (The second instruction will not be processed.)
In this case, even if an error is detected, the completion device ((D) + 0) and completion status indication flag ((D) + 1) do not turn on.

(3) An error may occur if the same file is concurrently accessed by WFDEL and any other instruction (WMSEND, FTPPUT, FTPGET, WFWRITE, WFREAD).
Before executing instructions, provide interlocks between the dedicated instructions that will access the same file.

(4) This instruction is not available for interrupt programs.

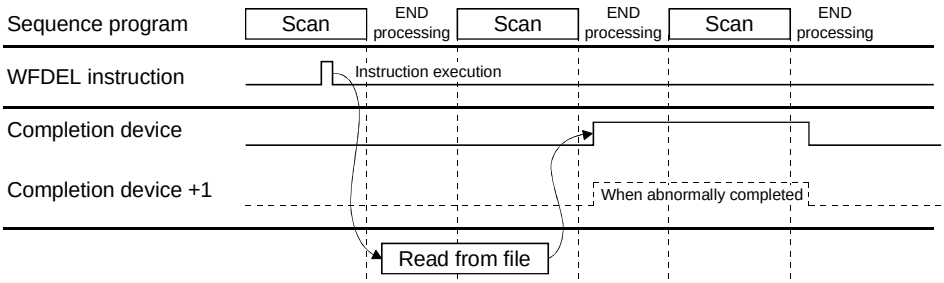
(5) As the user data file, a file in the "/CF/USER/" directory of the Compact Flash™ card can be specified.

(6) The execution and normal/abnormal completion statuses of the WFDEL instruction can be confirmed using the completion device ((D) + 0) and completion status indication flag ((D) + 1).
(a) Completion device ((D) + 0)
This device turns on in the END processing of the scan for which the WFDEL instruction is completed, and turns off in the next END processing.

(b) Completion status indication flag ((D) + 1)
This device turns on/off according to the completion status of the WFDEL instruction.
Normally completed : Remains off.
Abnormally completed: Turns on in the END processing of the scan where the WFDEL instruction is completed, and turns off in the next END processing.

[Operation at execution of WFDEL instruction]

When the WFDEL instruction is completed, the completion device (bit device) set in ((D) + 0) turns on in the END processing of the completed scan, and turns off in the next END processing.
When an error occurs, the completion device set in ((D) + 1) turns on and an error code is stored into the completion status (word device) set in ((S) + 1).

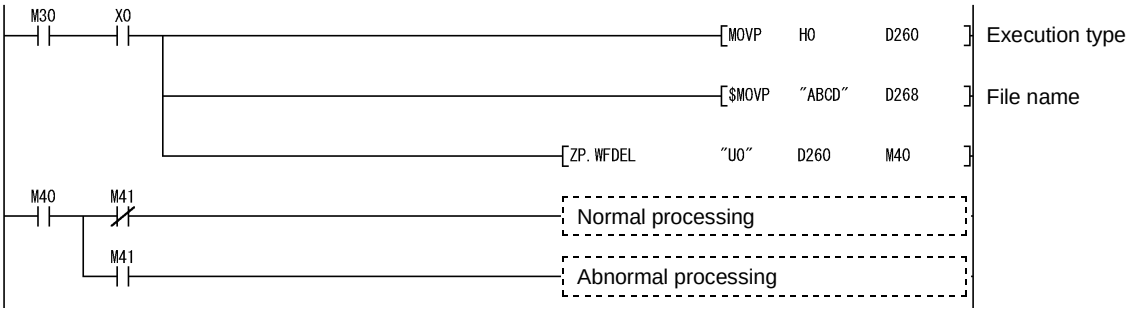


Error

When the dedicated instruction is abnormally completed, the abnormal completion signal ((D) + 1) turns on and a corresponding error code is stored into the completion status ((S) + 1).
Check the error status according to the error code and take corrective action.
Refer to Section 9.3 for the error code.

Program example

Program with which the Web server module mounted in the position of I/O numbers X/Y00 to X/Y1F deletes the "ABCD.BIN" file in the "/CF/USER/" directory when M30 is turned on.



9 TROUBLE SHOOTING

9.1 Trouble Shooting

First check the module status and network connection status of the Web server module according to (1) and (2) in this section, and then read the troubleshooting of the corresponding function.

(1) Troubleshooting on LED display and I/O signal

Symptom	Check point	Corrective action
RUN LED does not turn on.	The module is not ready.	• Wait until the module starts.
	Watch dog timer error (X1F) is on.	• If the watch dog timer error is ON, please consult your local Mitsubishi service center or representative, explaining a detailed description of the problem.
ERR. LED is on or flickering.	The battery is not connected or the battery voltage has dropped.	• Check whether the battery is connected. (Refer to Section 4.10.2) • Replace the battery. (Refer to Section 4.10.3)
	Any of Error detection signals (X11 to X19, X1C) is on. X11: Tag collection error X12: Logging error X13: CPU event monitor error X14: Tag event monitor error X15: Time event monitor error X16: Access target CPU error X17: E-mail transmission error X18: FTP transfer error X19: Connection error X1C: Other error	• Confirm the error definition and take corrective action according to the error code stored when any of the errors indicated in the left is detected. (Refer to Section 9.2)
	Check the error code in "System monitor" of GX Developer.	• Confirm the error definition and take corrective action according to the error code. (Refer to Section 9.2)
Module READY (X0) does not turn on, or it takes a long time to turn on.	The module is not ready.	• Depending the set number in the access target CPU setting, it may take several minutes until X0 turns ON. (Refer to Section 4.6.7 (3))
	Many files are stored in the set Compact Flash™ card.	• If many files are stored in the Compact Flash™ card, the time required for X0 to turn ON will be lengthened. (Refer to Section 4.9.1) • Delete unnecessary files in the Compact Flash™ card.
Compact Flash™ card setting status (X1) does not turn on, or it takes a long time to turn on.	The file access stop status is active (X2 is on).	• Cancel the file access stop status. (Refer to Section 4.9)
	Many files are stored in the set Compact Flash™ card.	• If many files are stored in the Compact Flash™ card, the time required for X1 to turn ON will be lengthened. (Refer to Section 4.9.1) • Delete unnecessary files in the Compact Flash™ card.

(2) Troubleshooting on network connection

(a) Common, LAN connection

Symptom	Check point	Corrective action
Access to the Web server module cannot be made. (The Web screen is not displayed or a file cannot be transferred to the Web server module.)	The URL is not correct.	• Check the URL.
	The mode is not "Online".	• Set the mode to "Online".
	The Web server module is not connected to the network. (X4 ═ ON)	• Connect the Web server module to the network. (Refer to Section 4.6.3)
	There is cable disconnection in the connection path.	• Connect the cable securely.
	There are the same IP addresses.	• Check the IP address.
	There is a firewall or proxy server in the connection path.	• Consult a network administrator for the firewall or proxy server setting.
	The personal computer has any problem. Check if the another Web site is displayed correctly or not.	• Replace the personal computer. • Update the Web browser. • Install the OS again.

(b) Internet connection

Symptom	Check point	Corrective action
Connection to the Internet service provider cannot be made.	The Internet service provider setting is not correct.	• Check the Internet service provider setting.
	The connection path to the Internet service provider is not correct.	• Check the connection path to the Internet service provider.
Connection to the Internet service provider is not stable (e.g. connection not possible sometimes or disrupted.)	A mobile device is used to make connection from a place of weak radio waves.	• Move the Internet service provider connection device to a place of strong radio waves.
	There is the influence of noise from the surroundings.	• Take measures against noise in the connection path to the Internet service provider.

(c) ADSL connection via router

Symptom	Check point	Corrective action
ADSL connection via router cannot be made.	"Connecting through LAN or router" was not selected in the system setting.	• Select "Connecting through LAN or router" in the system setting. (Refer to Section 4.6.3.)
	When "Register the above port No. to the router's NAT" was selected in the system setting, the router is not compatible with UPnP.	• Use the router compatible with UPnP.
	"Register the above port No. to the router's NAT" was not selected in the system setting.	• Set the NAT of the router manually. (Refer to the router manual.)
	The information (user name, password) for connection to the Internet service provider was not set to the router.	• Set to the router the information for connection to the Internet service provider. (Refer to the router manual.)

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(3) Troubleshooting on monitor display

Symptom	Check point	Corrective action
Web screen is not displayed. (Sounds are not replayed.)	The Web server module is not connected to the network correctly.	• Check the module status and network connection status of the Web server module. (Refer to (1), (2) in this section.) • Restart the Web browser.
Web screen is not displayed properly.	Java VM of Microsoft® Internet Explorer 5.5/6.0 is not the version specified in the manual.	• Check the version of Java VM. (Refer to Section 3.1.)
	Setting was made to use "Socks" in the Proxy Settings of Internet Explorer.	• Make setting not to use "Socks" in the Proxy Settings of Internet Explorer.
	The personal computer has any problem. Check if another Web site is displayed correctly or not.	• Replace the personal computer. • Update the Web browser. • Install the OS again.
	The display setting of the personal computer is not proper.	• Change the Hardware accelerator setting of the display setting. (Adjust the Hardware accelerator setting in detailed settings on the <<Settings>> tab of "Display Properties" on Microsoft® Windows® .)
	The Compact Flash card formatted on Windows® XP/2000 has been set in the Web server module.	• Recover the Compact Flash card according to its manual.
Administrative menu screen is not displayed.	The account with administrator authority (user name/password) is not correct.	• Use the correct account with administrator authority. (Refer to Section 4.6.5)
Devices are not monitored. (Display data are improper.)	The access target CPU setting is not correct.	• Check the access target CPU setting. (Refer to Section 4.6.7)
Tags are not monitored. (Display data are improper.)	The access target CPU setting is not correct.	• Check the access target CPU setting. (Refer to Section 4.6.7)
	Tag setting is not correct.	• Check the tag setting. (Refer to Section 6.3.3)
Monitoring stops during monitor operation.	Correct connection has not been established.	• Select the displayed monitor screen again and monitor the system. • Restart the Web browser and monitor the system. • Re-examine the cable connection.
	Microsoft® InterDev™ 6.0 (Visual Studio 6.0) has been installed.	• From [Tools] - [Options] on Microsoft® InterDevTM 6.0, open the Option dialog box, select [Debugger] - [General], and unmark the "Attach to execution program of this machine" setting in the Java items. • When Microsoft® InterDevTM 6.0 has already been uninstalled, reinstall it and perform the above operation.
Run time error occurred.	If "Debug?" is displayed, select "No". Check the statuses of the connection devices such as a modem, cables and the line. Button or other operation was performed before the complete screen was displayed.	• Check the statuses of the connection devices such as a modem, cables and the line. • After deleting the temporary Internet files of Internet Explorer, try to connect again. • Start operation after the screen display is completed.

(4) Troubleshooting on device test and tag component test

Symptom	Check point	Corrective action
Device test cannot be conducted.	The account without device write authority was used to access.	• Access using the account with device write authority. (Refer to Section 4.6.5)
	Device write disable status is ON (YA is on).	• Enable Device write (turns off YA).
Tag component test cannot be conducted.	The account without tag component write authority was used to access.	• Access using the account with tag component write authority. (Refer to Section 4.6.5)
	Device write disable status is ON (YA is on).	• Enable Device write (turns off YA).
	"Data write" in the tag setting has been set to "Disable".	• Set "Data write" in the tag setting to "Enable". (Refer to Section 6.3.3)

(5) Troubleshooting on user HTML

* Refer to (3) in this section as well.

Symptom	Check point	Corrective action
Created user HTML is not displayed.	The URL is not correct.	• Check the URL.
	The created user HTML is not stored.	• Store the created user HTML via FTP.
	The applet size in the applet part is not correct.	• Specify the correct applet size.
The audio part does not play sounds.	The speaker has not been powered ON. The volume is not correct.	• Turn on the speaker. • Adjust the volume.
	The personal computer does not have audio playback hardware.	• Use a personal computer that has audio playback hardware.
	Other sounds cannot be played on the personal computer being used.	• Use a personal computer that is capable of audio replay.
	A WAV format audio file was specified when using Microsoft® VM.	• Specify an AU format audio file. • Use Sun Microsystems Inc. Java VM.
Display (sounds) does not change even after the tag component value falls within the specified range.	The device value corresponding to the tag component cannot be retained for a time longer than the tag collection interval and communication time.	• Keep the device value corresponding to a tag component for a time longer than the tag collection interval and communication time in the sequence program.

(6) Troubleshooting on logging

Symptom	Check point	Corrective action
Logging cannot be performed. (Logging data are improper.)	The access target CPU setting is not correct.	• Check the access target CPU setting. (Refer to Section 4.6.7)
	Tag setting is not correct.	• Check the tag setting. (Refer to Section 6.3.3)
	"Not execute" has been set in "Sampling" of the tag setting.	• Set "Execute" in "Sampling" of the tag setting. (Refer to Section 6.3.3)
	The logging setting is not correct.	• Check the logging setting. (Refer to Section 6.4.4)
	Storage area of the logging file has no free space.	• By FTP operation, delete unnecessary files to make a free area for logging files. (Section 6.7.1) • By the LOGDEL instruction, delete the saved logging files. (Refer to Section 8.6)
	The Compact Flash™ card has not been set.	• Set the Compact Flash™ card. (Refer to Section 4.9)
	The Compact Flash™ card has not been formatted.	• Format the Compact Flash™ card. (Refer to Section 6.10.4)
High speed logging cannot be performed.	"Sampling: Execute at high speed" was not selected in the tag setting.	• Select "Sampling: Execute at high speed" in the tag setting. (Refer to Section 6.3.3.)
	A "user setting system area" was not created in the control CPU of the Web server module.	• Create a user setting system area using GX Developer. (Refer to Section 6.3.3 REMARKS.)

(7) Troubleshooting on e-mail

Symptom	Check point	Corrective action
Address is not notified.	The address notification setting is not correct.	• Check the address notification setting. (Refer to Section 6.9.2)
	• Check whether e-mail can be sent to the specified destination with a commercial e-mail software. • Check whether a file can be transferred to the specified destination with commercial FTP client software.	• Contact the Internet service provider. • Contact the administrator of the FTP server.
	When "Notify the global IP address obtained from the router" was selected in the address notification setting, the router does not support UPnP.	• Use a UPnP-enabled router. • Select "Notify the following HTTP port number" in the address notification setting. (Refer to Section 6.9.2.)
E-mail is not sent.	The e-mail setting is not correct.	• Check the e-mail setting (period, colon, etc.). (Refer to Section 6.6.3)
	Check whether e-mail can be sent to the specified destination with commercial e-mail software.	• Contact the Internet service provider.
	The e-mail account is not correct.	• Check the e-mail account assigned by the Internet service provider.
	The PLC CPU has been powered on right after powered off.	• Power on the PLC a few minutes after power-off.
	The mail server of the Internet service provider requires POP authentication at e-mail transmission. (POP before SMTP) (*) *Contact the Internet service provider for the above.	• In the option setting of the e-mail setting, mark "POP before SMTP" check box and set the POP server name. (Refer to Section 6.6.3.)
Event is not notified.	The access target CPU setting is not correct.	• Check the access target CPU setting. (Refer to Section 4.6.7)
	The event setting is not correct.	• Check the event setting (condition, etc.). (Refer to Section 6.5.3)
	• Check whether e-mail can be sent to the specified destination with commercial e-mail software. • Check whether a file can be transferred to the specified destination with commercial FTP client software.	• Contact the Internet service provider. • Contact the administrator of the FTP server.

(8) Troubleshooting on FTP

Symptom	Check point	Corrective action
File cannot be transferred to the Web server module.	The Web server module is not connected to the network correctly.	• Check the module status and network connection status of the Web server module. (Refer to (1), (2) in this section.)
File cannot be transferred from the Web server module.	The FTP server setting is not correct.	• Check the FTP setting. (Refer to Section 6.7.3)
	Check whether a file can be transferred to the specified destination with commercial FTP client software.	• Contact the administrator of the FTP server.
	The FTP account is not correct.	• Check the FTP account assigned by the Internet service provider.
	The PLC CPU has been powered on right after powered off.	• Power on the PLC a few minutes after power-off.
	When accessing by the Internet Explorer, the user authentication screen was not displayed.	• Enter the Web server module address as follows: [ftp://<User name>:<Password>@<Web server module address or host name>/] (Example) In the case of factory setting: ftp://QJ71WS96:MITSUBISHI@192.168.3.3/
426 (Data connection error) error occurs during file transfer via FTP.	FTP transfer has been executed with many files specified at one time.	• Reduce the number of files to be transferred at one time, and execute the FTP instruction again.

(9) Troubleshooting on data management and Compact Flash™ card

Symptom	Check point	Corrective action
Data cannot be backed up onto the Compact Flash™ card.	The Compact Flash™ card has not been formatted.	• Format the Compact Flash™ card.
	The standard ROM or Compact Flash™ card is being accessed.	• Wait until the access of the standard ROM or Compact Flash™ card is completed.
Data cannot be restored from the Compact Flash™ card.	The standard ROM or Compact Flash™ card is being accessed.	• Wait until the access of the standard ROM or Compact Flash™ card is completed.
Compact Flash™ card cannot be formatted.	The Compact Flash™ card is being accessed.	• Wait until the access of the Compact Flash™ card is completed.

Symptom	Check point	Corrective action
The following occurs when accessing the Compact Flash™ card from a personal computer, etc. • The file size is displayed as 0 byte. • Spaces are added to the end of the file data. • A message of file error, file entry error or file size error is displayed and the file cannot be opened.	Whether the power status is ON or OFF, the file access was not stopped before removing or replacing the Compact Flash™ card.	• Whether the power status is ON or OFF, be sure to execute the file access processing before removing or replacing the Compact Flash™ card. (Refer to Section 4.9) • Execute either of the following to restore the erroneous Compact Flash™ card. 1) Set the erroneous Compact Flash ™ card into the Web server module again. Execute the file access stop processing and remove the card. (Refer to Section 4.9) 2) Use the chkdsk command at the command prompt of Microsoft© Windows© for restoration.
Files on Compact Flash™ card are cleared at power-off.	The Compact Flash™ card is an inapplicable type.	• Change the Compact Flash™ card.

(10) Troubleshooting on communication between Web server module and access target CPU

Symptom	Check point	Corrective action
Access to other station cannot be made via Q series E71.	A remote password has been set to the GX Developer communication port (UDP/IP) of Q series E71 on the target or relay station.	• Clear the remote password setting for the GX Developer communication port (UDP/IP) of Q series E71 on the target or relay station.

(11) Troubleshooting on file system

Symptom	Check point	Corrective action
Web server module does not start up. Module READY (X0) does not turn on. Logging data, user HTML, etc. are destroyed.	• A battery error has occurred. (Refer to Section 4.10) • During operation without battery, the PLC CPU was powered off with no shut-down operation performed. (Refer to Section 4.11) • The battery was disconnected with no shut-down operation performed. (Refer to Section 4.12)	• When a battery error occurs, replace the battery. • Restore the data in the following procedure. 1) Return the Web server module to the default status. (Refer to Section 4.13) 2) Restore backup data. (Refer to Section 6.10)

9.2 Error Codes

This section explains the error code.

9.2.1 About error code

(1) Checking the ERR. LED on the front of the Web server module

Check the ERR. LED on the front panel of the Web server module for an error.
On : Module continue error has occurred.
Flicker : Module stop error has occurred.

(2) Checking the error code in "System monitor" of GX Developer (Refer to Section 9.2.2)

When the ERR. LED turns on or flickers, check the error code in "System monitor" of GX Developer.
Confirm the error definition and take corrective action according to the error code.
Refer to Section 9.3 for the error code.
The error code can also be confirmed in the self-diagnostics monitor of the standard screen. (Refer to Section 6.2.6.)

(3) Identifying the erroneous part

Monitor the I/O signals (X11 to X19, X1C) to identify the erroneous part, and confirm the error code at the buffer memory address corresponding to the I/O signal.

Input Signal	Erroneous part	Buffer memory		Reference Section
		Error code storage location	Buffer memory address	
X11	Tag collection error	Tag status area	1000 to 1075	Section 3.8.10
X12	Logging error	Logging status area	2000 to 2267	Section 3.8.11
X13	CPU event monitor error	CPU event monitor status area 1 ∗1	3300 to 3375	Section 3.8.12
X14	Tag event monitor error	Tag event monitor status area 1 ∗2	10000 to 10447	Section 3.8.14
X15	Time event monitor error	Time /Interval monitor status area	3200 to 3217	Section 3.8.16
X16	Access target CPU error	Access target CPU1 setting status area	4000 to 4071	Section 3.8.17
X17	E-mail transmission error	E-mail transmission status area	5000 to 5984	Section 3.8.18
X18	FTP transmission error	FTP client status (PUT) area	6002 to 6553	Section 3.8.20
		FTP client status (GET) area	8002 to 8553	Section 3.8.21
X19	Connection error	Connection error code	30	Section 3.8.2
X1C	Other error	Error log area	150 to 247	Section 3.8.6

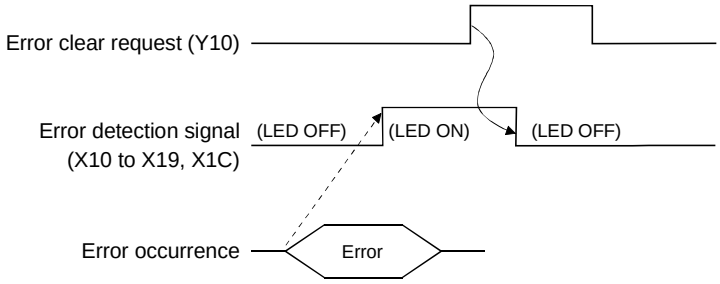
∗1 The statuses of CPU event setting No. 1 to 16 are also stored into the CPU event status area 2 (buffer memory: 3000 to 3018). (Refer to Section 3.8.13.)
∗2 The statuses of tag event setting No. 1 to 16 are also stored into the tag event status area 2 (buffer memory: 3100 to 3118). (Refer to Section 3.8.15.)

REMARK

How to turn off the ERR. LED is explained below.

(1) Turning on Error clear request (Y10) during module continue error occurrence (while the ERR. LED is on) turns off the ERR. LED and turns off X10 to X19 and X1C. (*)

* During module stop error occurrence (while the ERR. LED is flickering), turning on Error clear request (Y10) does not turn off the ERR. LED. In this case, power off the PLC and then on or reset the CPU module.



(2) Turning on Error clear request (Y10) also clears the following areas.

- Current error area (address: 140 to 145) of the buffer memory.
- Latest error code displayed in the system monitor of GX Developer (refer to Section 9.2.2)

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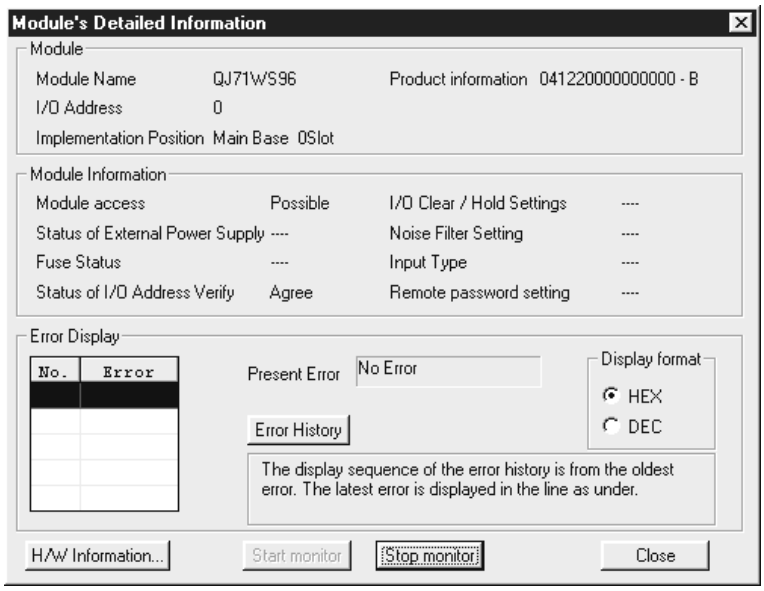
9.2.2 System monitor

The Web server module status can be checked from the System monitor.

(1) Checking the module status and error code on the "Module's Detailed Information" screen of the diagnostics function

[Start-up procedure]

GX Developer → [Diagnostics] → [System monitor] → "Module's detailed information"



[Display details]

- Module

  The following data are displayed.

  Module name : Mounting module model name
  I/O address : Head I/O signal number of target module
  Implentation position : Slot position where the module is mounted
  Product information : Product information

  ＊ The end of the product information indicates the function version of the module.
  The Web server module is available with function version B or later.
  (Example) "B" at the end indicates that the module is of function version B.

- Module access

  Module access is displayed as possible when Watch dog timer error (X1F) is off.

- Status of I/O address verify

  Whether the module set with parameters is consistent with the actually mounted module or not is displayed.

- Present error

  The error code of the latest error is displayed.
  Refer to Section 9.3 for the error code.

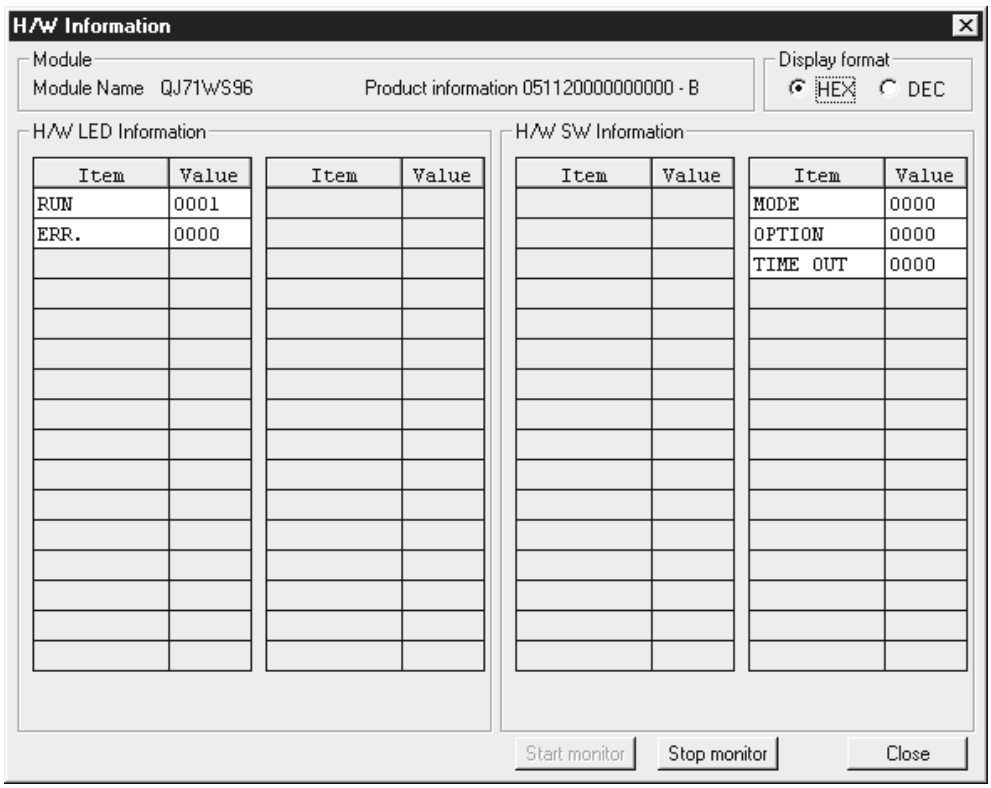
- Error display

  The error codes of the errors that has occurred is displayed.

(2) Checking the LED ON/OFF status and switch setting status on the "H/W Information screen" of the diagnostics function

[Start-up procedure]

GX Developer → [Diagnostics] → [System monitor] → "Module's detailed information" → "H/W information"



[Display details]

The Web server module data stored in the following buffer memory areas are displayed.

No.	Display	Corresponding Buffer Memory	Address
1	H/W LED information left side	RUN LED status	0
2		ERR. LED status	1
1	H/W SW information	Switch 1 status (Mode setting)	2
2		Switch 2 status (Default operation setting/Battery error detection setting/Logging monitor setting)	3
3		Switch 3 status (Response monitoring time setting)	4

9.3 Error Code List

The error code list is indicated on subsequent pages.

[Error type]
The errors are divided into the following three types.

(1) Module stop error (Displayed as "Stop" in the table)

(a) The ERR. LED flickers.

(b) When a module stop error occurs, the following functions of the Web server module will stop.
1) Monitoring function
2) Tag function
3) Logging function
4) Event monitor function
5) Dedicated instruction
According to the error code, take corrective action for the error, and power the PLC off and then on or reset the CPU module.

(c) The error code is stored into the buffer memory area corresponding to the erroneous part. Refer to Section 9.2 About error code.

(2) Module continue error (Displayed as "Continue" in the table)

(a) The ERR. LED turns on.

(b) When a module continue error occurs, the functions of the Web server module will be maintained.
Taking corrective action according to the error code will rectify the operation.
However, since the ERR. LED remains on, turn it off by Error clear request (Y10).

(c) The error code is stored into the buffer memory area corresponding to the erroneous part. Refer to Section 9.2 About error code.

(3) Browser display/Dedicated instruction error (Displayed as "Display" in the table)

(a) The ERR. LED does not turn on/flicker (does not change).

(b) When a browser display/dedicated instruction error occurs, the functions of the Web server module will be maintained.

(c) When a browser display/dedicated instruction error occurs, no error code is stored into the buffer memory.
1) When a browser display/dedicated instruction error occurs due to the Web browser operation
The error code is displayed on the Web browser. (Displayed on the applet display screen, etc.)
2) When a browser display/dedicated instruction error occurs due to the dedicated instruction
The error code is stored into Completion status.

Table Error Code List

Error code	Error name	Error definition	Corrective action	Error type
0001h	System error	—	• System error (*1)	Continue
0002h	Response time-out error	No response from the external station.	• Check the access target CPU setting. (Refer to Section 4.6.7) • Check the communication cable status and access target CPU status.	Continue
0041h 0042h 0043h 0044h	System error	—	• System error (*1)	Continue
0045h	Processing code error	An unsupported processing code was issued.	• Check the CPU in the access path.	Continue
0046h	Station No. specification error	The specified station No. is incorrect.	• Check the station No. setting in the access target CPU setting. (Refer to Section 4.6.7)	Continue
0047h	Receive data error	Data are not received.	• Check the CPU in the access path.	Continue
0048h 0049h 004Dh 004Eh 0050h 0051h	System error	—	• System error (*1)	Continue
0055h	Channel number error	The Ethernet module is set so that its write is disabled at RUN time.	• Check the Ethernet module setting of the target CPU.	Continue
0064h	System error	—	• System error (*1)	Continue
0065h	Routing parameter error	No routing parameters are set.	• Set routing parameters to the MELSECNET/H and MELSECNET/10 module.	Continue
0066h	Data send error	Failed to send data.	• Check the CPU in the access path.	Continue
0067h	Data receive error	Failed to receive data.	• Check the CPU in the access path.	Continue
0080h	Read size error	The read size is abnormal.	• Check the CPU in the access path.	Continue
0081h	Device type error	The specified device type is invalid.	• Check the device type entered in device monitor or component setting.	Continue
0082h	Device number error	The specified device number is outside the range.	• Check the device No. entered in device monitor or component setting.	Continue

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Error code	Error name	Error definition	Corrective action	Error type
0083h	Device point error	The number of device points is abnormal.	• Check the CPU in the access path.	Continue
0084h	Write size error	The write size is abnormal.	• Check the CPU in the access path.	Continue
0085h	Link parameter error	The link parameters are destroyed.	• Re-set the link parameters for PLC CPUs on the access route.	Continue
0087h 0088h 0089h	System error	—	• System error (*1)	Continue
00D2h	RUN time disable error	A request disabled during RUN time was issued.	• Check the CPU in the access path.	Continue
00D4h	System error	—	• System error (*1)	Continue
00D7h	Receive data length error	The receive data length or byte length is outside the range.	• Check the cables connected on the access route.	Continue
00D8h	Protocol error	The communication procedure is improper.	• Check the cables connected on the access route.	Continue
00D9h	Address error	The address is abnormal.	• Check the CPU in the access path.	Continue
00DBh	Write error	Data cannot be written.	• Check the CPU in the access path.	Continue
00E0h	Station No. error	The specified station No. does not exist.	• Check the station No. setting in the access target CPU setting. (Refer to Section 4.6.7)	Continue
00E1h	Processing mode error	A request invalid for the access target CPU was sent.	• Check “PLC series” in the access target CPU setting. (Refer to Section 4.6.7)	Continue
00E2h	Intelligent function module error	The specified intelligent (special) function module is faulty.	• Check the “U□\G□” of the buffer memory specified in Device monitor or Component setting.	Continue
00E3h	Other data error	Request data is erroneous.	• Check the CPU in the access path.	Continue
00E4h	Link specification error	The request sent to the link module on the access route is invalid. (Unsupported access route)	• Review the access route referring to the accessible range. (Refer to Appendix 2)	Continue
00E8h	System error	—	• System error (*1)	Continue
00E9h	Link time-out	The link interruption has occurred at the access target during processing.	• Make the module return to the link on the access route.	Continue

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Error code	Error name	Error definition	Corrective action	Error type
00EAh	Special module BUSY	The receive buffer of the access target is full or is not ready for reception.	• Check the hardware of the intelligent (special) function module.	Continue
00ECh	Access target BUSY	The receive buffer of the access target is full or is not ready for reception.	• Check the access target.	Continue
00F0h	Link error	The request was sent to a link-stopped station.	• Make the module return to the link on the access route.	Continue
00F1h	Special module bus error	The specified intelligent (special) function module is not ready for processing.	• Check the hardware of the intelligent (special) function module.	Continue
00F2h	Special module time-out	No response from the specified intelligent (special) function module.	• Check the hardware of the intelligent (special) function module.	Continue
0100h 0101h 0102h 0110h 0112h	System Error	—	• System Error (*1)	Stop
0180h	Switch setting error	A switch setting error was detected in the hardware test.	• Check the switch setting. (Refer to Section 4.7) • Perform the hardware test again. (*2)	Stop
0181h	ROM check sum error	A ROM error was detected in the hardware test.	• Perform the hardware test again. (*2)	Stop
0182h	RAM test error	A RAM error was detected in the hardware test.	• Perform the hardware test again. (*2)	Stop
0188h 0189h 018Ah 018Bh 018Ch	CH2 overrun error CH2 parity error CH2 framing error CH2 time-out error CH2 data error	An error occurred in the CH2 self-loopback test.	• Check the wiring • Hardware fault (*3)	Stop
0190h 0191h 0192h 0193h	CH1 time-out error CH1 communication error CH1 comparison error CH1 in-frame position error	An error occurred in the CH1 self-loopback test.	• Hardware fault (*3)	Stop
0200h 0201h 0202h 0203h 0210h 0300h	System error	—	• System error (*1)	Stop

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Error code	Error name	Error definition	Corrective action	Error type
0301h	System setting file read error	Failed to read the system setting file. (The setting file is destroyed.)	• After initialization of the module is complete (Refer to Section 4.13), make the system setting (refer to Section 4.6.3).	Stop
0302h	Dial-up setting file read error	Failed to read the dial-up setting file. (The setting file is destroyed.)	• After initialization of the module is complete (refer to Section 4.13), make the dial-up setting (Refer to Section 4.6.4).	Stop
0303h	PPP negotiation error	Failed in authentication at the time of dial-up connection.	• Check the dial-up setting (whether the user name and password are correct). (Refer to Section 4.6.4) • Check the power supply of the modem, cable and line status. • Check the system setting (whether "Obtain an IP address automatically." has been selected). (Refer to Section 4.6.3)	Continue
0304h	DHCP parameter acquisition error	Failed to obtain the network parameter data from the DHCP server when "Obtain an IP address automatically." is set for LAN connection.	• Check the status of connection with the DHCP server. • Check the cable. • Check the DHCP server setting.	Continue
0305h	System error	—	• System error (*1)	Stop
0306h				Continue
0307h				Continue
0308h				Continue
0310h	Modem initialization error	Failed to issue AT command for modem initialization, at the time of dial-up connection.	• Check the power supply of the modem and cable status. • Check the dial-up setting (whether the communication speed matches the modem specifications). (Refer to Section 4.6.4)	Continue
0311h	Addition command error	Failed to issue the Additional command (AT command) at the time of dial-up connection.	• Check whether the additional command set in "AT command additional setting" of the dial-up setting is applicable to the modem to be used. (Refer to Section 4.6.4)	Continue

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Error code	Error name	Error definition	Corrective action	Error type
0312h	Flow control command error	The modem is not compatible with the flow control command.	• Replace the modem with the one that is compatible with the flow control command. (Refer to Section 4.6.4 (6)) • Set the flow control command in "AT command additional setting" of the dial-up setting. (Refer to Section 4.6.4)	Continue
0313h	Dial pause command error	The modem is not compatible with the dial pause command.	• Replace the modem with the one that is compatible with the dial pause command. (Refer to Section 4.6.4 (6)) • Set the dial pause command in "AT command additional setting" of the dial-up setting. (Refer to Section 4.6.4)	Continue
0314h	Dial-up error	Failed to establish dial-up connection.	• Check the power supply of the modem, cable and line status. • Check the dial-up setting (whether the access point and dial pause time are correct). (Refer to Section 4.6.4)	Continue
0315h	CALL connection error	Failed to connect the line by CALL function.	• Check the power supply of the modem, cable and line status. • Check the dial-up setting (whether the access point, user name and password are correct). (Refer to Section 4.6.4) • Check the system setting (whether "Obtain an IP address automatically." is selected). (Refer to Section 4.6.3)	Continue
0316h	Line disconnection error	The line was disrupted unexpectedly. (due to cable breakage, power-off of the modem or line disruption by the service provider)	• Check the power supply of the modem, cable and line status.	Continue
0317h	Modem DR signal error	The DR signal of the modem turned off.	• Check the power supply of the modem and cable status.	Continue

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Error code	Error name	Error definition	Corrective action	Error type
0318h	Access point specification error	The phone number of the access point has not specified.	• Input the phone number in "Access point" of the dial-up setting and try to connect again. (Refer to Section 4.6.4)	Continue
0319h	Network reconnection error	Failed to reconnect the line in the case of unexpected line disruption.	• Check the power supply of the modem, cable and line status.	Continue
		Failed to automatically update the lease period of the IP address obtained from the DHCP server.	• Check the cable and DHCP server status (start-up status, whether the assigned IP address is reserved).	
031Ah	Network diagnosis error	Failed to run network diagnostics (ping transmission).	• Check the cable and external device status. • Check whether the transmission destination is correct or not in the "Network diagnosis setting" of the system setting. (Refer to Section 4.6.3.)	Continue
0320h	PPPoE negotiation error	Failed in authentication at the time of ADSL connection.	• Check the dial-up setting. (Refer to Section 4.6.4) • Check the power supply of the modem, cable and line status. • If ADSL disconnection has not correctly processed due to the unexpected cause such as power-off or cable disconnection, make sure to increase the connection time interval by 5 minutes or more.	Continue
0321h 0322h 0323h 0330h	System error	—	• System error (*1)	Stop
0340h	UPnP communication timeout	Timeout occurred in the communication with the UPnP router.	• Check whether the UPnP router is powered on. • Check the cable connected to up to the UPnP router. • Confirm that the router supports UPnP. • Power on the Web server module when the UPnP router is ready.	Continue

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Error code	Error name	Error definition	Corrective action	Error type
0341h	UPnP router detection fault	Failed to detect the UPnP router.	• Check whether the UPnP router is powered on. • Check the cable connected to up to the UPnP router. • Confirm that the router supports UPnP.	Continue
0342h	UPnP faulty response detected	An error response was received from the UPnP router.	• Check whether the UPnP router is connected to WAN (Internet). • Power on the Web server module when the UPnP router is ready.	Continue
034Fh	System error	—	• System error (＊1)	Stop
0360h	IP filter setting file fault	The IP filter setting file does not exist or is corrupted.	• After initializing the module (refer to Section 4.13), make IP filter setting (refer to Section 4.6.6) again.	Stop
0361h	System error	—	• System error (＊1)	Stop
0400h	Standard ROM format error	Data cannot be written to the standard ROM. (The standard ROM has no free space.)	• Delete unnecessary files by FTP operation and re-execute. (Refer to Section 6.7)	Continue
0401h 0402h	System error	—	• System error (＊1)	Stop
0430h	CF card absence error	The CF card has not been set.	• Set the CF card and re-execute.	Display
0431h	CSV export error	The CF card does not have sufficient free space or is corrupted.	• Delete unnecessary files on the CF card, or set another CF card and execute CSV export again. (Refer to Section 6.10.4.)	Display
0432h	Import file error	There are not all CSV files necessary for import, or there is a file that cannot be read.	• Add the file displayed in Status on the data management screen, and execute CSV import again. (Refer to Section 6.10.4.)	Display
0433h	Label error	The label that must be set does not exist.	• Add a necessary label to the file displayed in Status on the data management screen, and execute CSV import again. (Refer to Section 6.10.4, Appendix 6.)	Display
0435h	Out of range error	The item value is outside the setting range or the item does not exist.	• Check the item of the file displayed in Status on the data management screen, and execute CSV import again. (Refer to Section 6.10.4, Appendix 6.)	Display

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Error code	Error name	Error definition	Corrective action	Error type
0436h	Reference error	The setting referred to by the item value does not exist.	• Check the item of the file displayed in Status on the data management screen, and execute CSV import again. (Refer to Section 6.10.4, Appendix 6.)	Display
0437h	Duplicate label error	The same labels exist.	• Check the label of the file displayed in Status on the data management screen, and execute CSV import again. (Refer to Section 6.10.4, Appendix 6.)	Display
0438h	Component type error	A string type component was specified in the tag event setting.	• Check the contents of TAGEVT.CSV and execute CSV import again. (Refer to Section 6.10.4, Appendix 6.6)	Display
0480h	CF card initialization error	The CF card cannot be initialized.	• Check whether the CF card has been set securely. (Refer to Section 4.9) • Replace the CF card.	Continue
0481h	CF card drive data retrieve error	The drive data of the CF card cannot be read.	• Check whether the CF card has been set securely. (Refer to Section 4.9) • Replace the CF card.	Continue
0490h 0491h 0492h 0493h	System error	—	• System error (＊1)	Stop
0494h	CF card format error	Failed to format the CF card.	• Check whether the CF card is set securely. (Refer to Section 4.9) • Check the CF card for a fault. (Perform disk check and formatting on the personal computer.)	Display
0495h	CF card check error	Failed to check the CF card.	• Check whether the CF card is faulty. (Execute Check disk or format on the personal computer, etc.)	Display
0496h	CF card response error	A time-out occurred during waiting for a response from the CF card when access was made to the CF card. (CF card failure)	• Raplace the CF card.	Continue

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Error code	Error name	Error definition	Corrective action	Error type
04A0h to 04AFh	Backup error	An error occurred during execution of "backup" of the data management. The lower 4 bits indicate the data where the error occurred. Bit0: Setting information Bit1: Logging Data Bit2: User HTML Bit3: Event history	• Check the free space of the CF card. • Check whether the CF card is set securely. (Refer to Section 4.9) • Check the CF card for a fault. (Perform disk check and formatting on the personal computer.)	Display
04B0h to 04BFh	Restore error	An error occurred during execution of "restore" for the data management. The lower 4 bits indicate the data where the error occurred. Bit0: Setting information Bit1: Logging Data Bit2: User HTML Bit3: Event history	• Check that the backup data exists in the "backup" folder of the CF card. • Check whether the CF card is set securely. (Refer to Section 4.9) • Check the CF card for a fault. (Perform disk check and formatting on the personal computer.)	Display
04C0h	Restore file structure error	The setting information file structure of the restore source CF card is not correct. An attempt was made to restore the backup data of a new version.	• Use the CF card backed up correctly. (Refer to Section 6.10.) • Confirm the serial No. of the module. (Refer to Appendix 5.2.)	Display
04C1h	Data management operating	Before the processing being executed in the data management was completed, the next processing was executed.	• After confirming that the processing being executed is completed in "Status" of the data management, execute the next processing. (Refer to Section 6.10.4)	Display
04D0h	Battery error	A battery voltage has been droped or battery connector is disconnected.	• Replace the battery. (Refer to Section 4.10.3) • Check the connection staus of the battery. (Refer to Section 4.10)	Continue
0500h	System error	—	• System error (*1)	Stop
0501h				Stop / Continue
0502h	APS mismatch	The request packet and the response packet are mismatched in APS.	• Retry to send the data.	Continue

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Error code	Error name	Error definition	Corrective action	Error type
0600h	Tag non-setting error	At start-up or setting update, the following was detected. • The tag name with no setting was specified in the logging setting or tag event setting. • The tag name specified in the logging setting or tag event setting was deleted.	• Specify the tag name set in the tag setting, or make the tag setting. (refer to Section 6.3.3)	Stop
		At other than a start or setting update, the following was detected. • The tag name with no setting was specified in the logging setting or tag event setting. • The tag name specified in the logging setting or tag event setting was deleted.		Display
0601h	Component non-setting error	The component name with no setting was specified in the tag event setting, or the component name specified in the tag event setting was deleted.	• Specify the component name set in the component setting, or make the component setting. (refer to Section 6.3.3)	Display
0602h	Logging non-setting error	The logging with no setting was specified for the Web browser or dedicated instruction.	• Specify the logging preset in the logging setting. (refer to Section 6.4.4)	Display
0603h	Tag non-sampling error	Though tag data monitor or logging was performed, the target tag was not sampled.	• Execute again after a while. • Select "Execute" in Sampling of the tag setting. (Refer to Section 6.3.3)	Display
0604h	Tag setting file error	The tag setting file is missing or destroyed.	• After initializing the module (refer to Section 4.13), make the tag setting (refer to Section 6.3.3) again.	Stop
0605h	Logging setting file error	The logging setting file is missing or destroyed.	• After initializing the module (refer to Section 4.13), make the logging setting (refer to Section 6.4.4) again.	Stop
0606h	Event setting file error	The event setting file is missing or destroyed.	• After initializing the module (refer to Section 4.12), make the event setting (refer to Section 6.5.3) again.	Stop

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Error code	Error name	Error definition	Corrective action	Error type
0607h	Access target CPU setting file error	The access target CPU setting file is missing or destroyed.	• After initializing the module (refer to Section 4.13), make the access target CPU setting (refer to Section 4.6.7) again.	Stop
0609h	Component setting error	Bits were specified for a word device in the component setting.	• Check the component setting. (Refer to Section 6.3.3)	Stop
060Ah	Component device error	The device name specified in the component setting is incorrect, or an unusable device was specified.	• Check the device of the component setting. (Refer to Section 6.3.3)	Stop
060Bh	Logging setting error	The logging setting file is destroyed.	• After initializing the module (refer to Section 4.13), perform the logging setting (refer to Section 6.4.5) again.	Stop
060Dh	CPU event setting error	The event setting file is destroyed.	• After initializing the module (refer to Section 4.13), perform the CPU event setting (refer to Section 6.5.3) again.	Stop
060Eh	Tag event setting error	The event setting file is destroyed.	• After initializing the module (refer to Section 4.13), perform the tag event setting (refer to Section 6.5.3) again.	Stop
060Fh	Time/Interval event setting error	The event setting file is destroyed.	• After initializing the module (refer to Section 4.13), perform the time/interval event setting (refer to Section 6.5.3) again.	Stop
0610h	Access target CPU setting error	The data of the network path of the access target CPU setting is destroyed.	• After initializing the module (refer to Section 4.13), perform the access target CPU setting (refer to Section 4.6.7) again.	Stop
0611h	File open error	At start-up or setting update, the following was detected. • Failed to open the logging file or event history file.	• By FTP operation (refer to Section 6.7), delete unnecessary files to secure a free space in the standard ROM. • Check the CF card. (Refer to Section 9.1 (9).)	Stop
		At other than start-up or setting update, the following was detected. • Failed to open the logging file or event history file.		Continue

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Error code	Error name	Error definition	Corrective action	Error type
0612h	File creation error	At start-up or setting update, the following was detected. • Failed to create a file.	• By FTP operation (refer to Section 6.7), delete unnecessary files to secure a free space in the standard ROM or CF card. • Check the CF card. (Refer to Section 9.1 (9).)	Stop
		At other than start-up or setting update, the following was detected. • Failed to create a file.		Continue
0613h	File write error	At start-up or setting update, the following was detected. • Failed to write a file.	• By FTP operation (refer to Section 6.7), delete unnecessary files to secure a free space in the standard ROM or CF card. • Check the CF card. (Refer to Section 9.1 (9).)	Stop
		At other than start-up or setting update, the following was detected. • Failed to write a file.		Continue
0614h	Directory creation error	At start-up or setting update, the following was detected. • Failed to create a directory.	• By FTP operation (refer to Section 6.7), delete unnecessary files to secure a free space in the standard ROM or CF card. • Check the CF card. (Refer to Section 9.1 (9).)	Stop
		At other than start-up or setting update, the following was detected. • Failed to create a directory.		Continue
0615h	Excessive number of saved logging files error	At start-up or setting update, the following was detected. • When "When the number of saved files exceeds the above set value: Stop" has been set in the logging setting, logging was stopped since the set number of saved files was reached.	• Delete logging files by FTP operation (refer to Section 6.7) or LOGDEL instruction (refer to Section 8.7).	Stop
		At other than start-up or setting update, the following was detected. • When "When the number of saved files exceeds the above set value: Stop" has been set in the logging setting, logging was stopped since the set number of saved files was reached.		Continue
0616h	Send queue error	The queue for e-mail or FTP transmission has become full.	• Reduce the frequency of e-mail or FTP transmission.	Continue
0617h	Module stop error	Processing is not available since a module stop error is on.	• Remove causes of the module stop error and reset the CPU module.	Stop

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Error code	Error name	Error definition	Corrective action	Error type
0618h	Setting update time-out error	Since the module load is too high the time for setting update ran out.	• Update the setting again. • Reduce the load for tag/logging/event monitor function and reset the CPU module.	Display
0619h	Device name error	The device name specified in the device monitor or device test is faulty or that of an unusable device.	• Refer to the accessible device list and enter the device name. (Refer to Appendix 2)	Display
0620h	File access stopped error	At start-up or setting update, the following was detected. • Operation involving file writing was attempted during file access stop.	• Turn on File access stop cancel request (Y3), and execute again after File access status (X2) has turned off. (Refer to Section 3.6.2 (X2))	Stop
		At other than start-up or setting update, the following was detected in the logging function, event monitor function or dedicated instruction. • Operation involving file writing was attempted during file access stop.		Continue
		At other than start-up or setting update, the following was detected in the dedicated instruction. • Operation involving file writing was attempted during file access stop.		Display
0621h	No CF card error	At start-up or setting update, the following was detected. • Accessing the CF card was attempted with no CF card set.	• Execute after setting the CF card. (Refer to Section 4.9)	Stop
		At other than start-up or setting update, the following was detected in the logging function or dedicated instruction. • Accessing the CF card was attempted with no CF card set.		Continue
		At other than start-up or setting update, the following was detected in the dedicated instruction, or user display parts. • Accessing the CF card was attempted with no CF card set.		Display

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Error code	Error name	Error definition	Corrective action	Error type
0622h	Unformatted CF card error	At start-up or setting update, the following was detected. • Accessing an unformatted CF card was attempted.	• Execute after formatting the CF card. (Refer to Section 6.10)	Stop
		At other than start-up or setting update, the following was detected in the logging function, dedicated instruction or user parts. • Accessing an unformatted CF card was attempted.		Continue
		At other than start-up or setting update, the following was detected in the dedicated instruction, or user parts. • Accessing an unformatted CF card was attempted.		Display
0623h	CF card formatting ...	At start-up or setting update, the following was detected. • Accessing the CF card was attempted during CF card formatting.	• Execute after formatting the CF card. (Refer to Section 6.10)	Stop
		At other than start-up or setting update, the following was detected in the logging function or dedicated instruction. • Accessing the CF card was attempted during CF card formatting.		Continue
		At other than start-up or setting update, the following was detected in the dedicated instruction, or user parts. • Accessing the CF card was attempted during CF card formatting.		Display

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Error code	Error name	Error definition	Corrective action	Error type
0624h	Backing up ...	At start-up or setting update, the following was detected. • File access was attempted during "backup" in Data management.	• Execute after confirming completion of backup in "Status" of Data management. (Refer to Section 6.10.4)	Stop
		At other than start-up or setting update, the following was detected in the logging function or dedicated instruction. • File access was attempted during "backup" in Data management.		Continue
		At other than start-up or setting update, the following was detected in the dedicated instruction, or user parts. • File access was attempted during "backup" in Data management.		Display
0625h	Restoring ...	At start-up or setting update, the following was detected. • File access was attempted during "restore" in Data management.	• Execute after confirming completion of restoration in "Status" of Data management. (Refer to Section 6.10.4)	Stop
		At other than start-up or setting update, the following was detected in the logging function or dedicated instruction. • File access was attempted during "restore" in Data management.		Continue
		At other than start-up or setting update, the following was detected in the dedicated instruction, or user parts. • File access was attempted during "restore" in Data management.		Display
0626h	Multiple CPU setting error	Invalid setting was made in "Multiple CPU specification" of the access target CPU setting.	• Check the access target CPU setting. (Refer to Section 4.6.7)	Stop

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Error code	Error name	Error definition	Corrective action	Error type
0627h	Network communication route error	The network No., start I/O address, or station No. set in "Network communication route" of the access target CPU setting is outside the range.	• Check the access target CPU setting. (Refer to Section 4.6.7)	Stop
0628h	Tag sampling interval setting error	Invalid setting was made in "Sampling Interval" of the tag setting.	• Check the tag setting. (Refer to Section 6.3.3)	Stop
0629h	Update-before-logging setting error	Invalid setting was made in "Update before logging" of the tag setting, or the tag setting file is destroyed.	• After initializing the module (refer to Section 4.13), perform the tag setting (refer to Section 6.3.3) again.	Stop
062Ah	Data write setting error	Invalid setting was made in "Data write" of the tag setting, or the tag setting file is destroyed.	• After initializing the module (refer to Section 4.13), perform the tag setting (refer to Section 6.3.3) again.	Stop
062Bh	File name setting error	Invalid setting was made in "File name" of the logging setting.	• Check the logging setting. (Refer to Section 6.4.4)	Stop
062Ch	Component setting error	Invalid setting was made in "Component setting" of the tag setting, or the tag setting file is destroyed.	• After initializing the module (refer to Section 4.13), perform the tag setting (refer to Section 6.3.3) again.	Stop
062Dh	No CPU specification error	The access target CPU specified in the component setting does not exist, or the access target CPU has been deleted.	• Specify the existing access target CPU.	Stop
062Eh	Data type incorrect error	The device specified in the component setting is not consistent with the data type. (A device other than a bit device was specified as a bit device or vice versa.)	• Check the component setting. (Refer to Section 6.3.3)	Stop
062Fh	Excessive number of characters error	The number of characters specified in the component setting is outside the range.	• Check the component setting. (Refer to Section 6.3.3)	Stop
0630h	Decimal/Exponential form setting error	Invalid setting was made in "Display form" of the component setting.	• Check the component setting. (Refer to Section 6.3.3)	Stop
0631h	Operation setting error	Invalid setting was made in "Operator/Operand" of the component setting.	• Check the component setting. (Refer to Section 6.3.3)	Stop

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Error code	Error name	Error definition	Corrective action	Error type
0632h	Logging specification error	Invalid setting was made in "Timing" of the logging setting, or the logging setting file is destroyed.	• After initializing the module (refer to Section 4.13), perform the logging setting (refer to Section 6.4.4) again.	Stop
0633h	Logging time setting error	Invalid setting was made in "Time/Interval specification" of the logging setting.	• Check the logging setting. (Refer to Section 6.4.4)	Stop
0634h	Logging storage setting error	Invalid setting was made in "Save in" of the logging setting, or the logging setting file is destroyed.	• After initializing the module (refer to Section 4.13), perform the logging setting (refer to Section 6.4.4) again.	Stop
0635h	Logging capacity setting error	Invalid setting was made in "File capacity" of the logging setting.	• Check the logging setting. (Refer to Section 6.4.4)	Stop
0636h	Number of saved files setting error	Invalid setting was made in "No. of saved files" of the logging setting.	• Check the logging setting. (Refer to Section 6.4.4)	Stop
0637h	CPU event historical data number error	Invalid setting was made in "No. of CPU event historical data" of the event setting.	• Check the event setting (Common setting). (Refer to Section 6.5.3)	Stop
0638h	Tag event historical data number error	Invalid setting was made in "No. of tag event historical data" of the event setting.	• Check the event setting (Common setting). (Refer to Section 6.5.3)	Stop
0639h	Time/Interval monitor historical data number error	Invalid setting was made in "No. of time/interval event historical data" of the event setting.	• Check the event setting (Common setting). (Refer to Section 6.5.3)	Stop
063Ah	No specified CPU error	The access target CPU specified in the CPU event setting does not exist, or the access target CPU has been deleted.	• Specify the existing access target CPU.	Stop
063Bh	CPU event interval setting error	Invalid setting was made in "Interval" of the CPU event setting.	• Check the CPU event setting. (Refer to Section 6.5.3)	Stop
063Ch	CPU event condition setting error	Invalid setting was made in "Condition" of the CPU event setting, or the event setting file is destroyed.	• After initializing the module (refer to Section 4.13), perform the event setting (refer to Section 6.5.3) again.	Stop
063Dh	CPU event monitor attached file error	Invalid setting was made in "Attached file" of the CPU event setting.	• Check the CPU event setting. (Refer to Section 6.5.3)	Stop
063Eh	Tag event monitor tag non-setting error	The tag specified in "Tag name" of the tag event setting does not exist.	• Check the tag event setting. (Refer to Section 6.5.3)	Stop

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Error code	Error name	Error definition	Corrective action	Error type
063Fh	Tag event monitor component non-setting error	The component specified in "Component name" of the tag event setting does not exist.	• Check the tag event setting. (Refer to Section 6.5.3)	Stop
0640h	Tag event monitor component type error	The data type of the component specified in "Component name" of the tag event setting is a string type.	• Check the tag event setting. (Refer to Section 6.5.3)	Stop
0641h	Tag event condition setting error	Invalid setting was made in "Condition" of the tag event setting, or the event setting file is destroyed.	• After initializing the module (refer to Section 4.13), perform the event setting (refer to Section 6.5.3) again.	Stop
0642h	Tag event monitor attached file error	Invalid setting was made in "Attached file" of the tag event setting.	• Check the tag event setting. (Refer to Section 6.5.3)	Stop
0643h	Time/Interval event monitor time setting error	Invalid setting was made in "Time/Interval" of the time/interval event setting.	• Check the time/interval event setting. (Refer to Section 6.5.3)	Stop
0644h	Time/Interval event monitor attached file error	Invalid setting was made in "Attached file" of the time/interval event setting.	• Check the time/interval event setting. (Refer to Section 6.5.3)	Stop
0645h	CPU event e-mail setting error	Though the e-mail setting was made in the CPU event setting, the destination was not specified in the common setting.	• Check the CPU event setting. (Refer to Section 6.5.3)	Stop
0646h	Tag event e-mail setting error	Though the e-mail setting was made in the tag event setting, the destination was not specified in the common setting.	• Check the tag event setting. (Refer to Section 6.5.3)	Stop
0647h	Time/Interval event e-mail setting error	Though the e-mail setting was made in the time/interval event setting, the destination was not specified in the common setting.	• Check the time/interval event setting. (Refer to Section 6.5.3)	Stop
0648h	Setting mismatch error	Setting update was performed after the monitor screen was displayed.	• Display the monitor screen again after selecting the monitor screen to be executed from the monitor screen menu again.	Display
0649h	Duplicate high speed tag specification error	The tag setting file is corrupted.	• Initialize the module (refer to Section 4.13) and then make the tag setting (refer to Section 6.3.3) again.	Stop

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Error code	Error name	Error definition	Corrective action	Error type
064Ah	Duplicate high speed logging specification error	There are more than one logging setting in which high speed sampling tag is specified. The logging setting file is corrupted.	• Check the logging setting. (Refer to Section 6.4.4) • Initialize the module (refer to Section 4.13) and then make the tag setting (refer to Section 6.3.3) again.	Stop
064Bh	Excessive number of device points for high speed sampling tag	Total device points of the high speed sampling tag exceeds 96 points.	• Check the component setting of the high speed sampling tag (refer to Section 6.3.3) and make setting so that the total device points do not exceed 96 points.	Stop
064Ch	High speed sampling tag component registration error	Failed to register the component device of the high speed sampling tag to the control CPU.	• Create or increase a user setting system area by GX Developer. (Refer to Section 6.3.3 REMARKS.)	Stop
064Dh	High speed sampling tag specification error	The high speed sampling tag was specified in the TAG instruction.	• Check the control data of the TAG instruction. (Refer to Section 8.5.)	Display
064Eh	High speed logging specification error	The high speed sampling logging was specified in the LOG instruction.	• Check the control data of the LOG instruction. (Refer to Section 8.6.)	Display
064Fh	No specified event error	The event specified in the logging setting does not exist or the event monitor setting was deleted.	• Specify an existing event.	Stop
0650h	High speed sampling tag CPU specification error	The CPU of other than the access target CPU setting No. 1 was specified for the component of the high speed sampling tag, or the tag setting file is corrupted.	• Initialize the module (refer to Section 4.13) and then make the tag setting (refer to Section 6.3.3) again.	Stop
0651h	High speed logging storage setting error	"Standard ROM" was selected in [Save in] of the high speed logging.	• Select the CF card.	Stop
06A0h	System error	—	• System error (*1)	Stop
06A1h				Continue
06A2h				Continue
06A3h	Rename error	Failed to change (rename) a logging file into the saved file.	• By FTP operation (refer to Section 6.7), delete unnecessary files to secure a free space in the standard ROM or CF card. • Check the CF card. (Refer to Section 9.1 (9).)	Continue

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Error code	Error name	Error definition	Corrective action	Error type
06A4h	System error	—	• System error (∗1)	Stop
06A5h				Stop
06A6h				Continue
06A7h				Continue
06A8h				Continue
06A9h				Display
06AAh				Stop
06ABh				Continue
06ACh				Continue
06ADh				Stop
0700h	Out-of-range argument error	The argument outside the range was specified in the dedicated instruction.	• Specify an argument in the correct range.	Display
0701h	Invalid argument error	The tag No., logging No., e-mail address No. or FTP transfer destination No. specified with the argument in the dedicated instruction does not exist.	• Specify existing setting No.	Display
0703h	No specified file error	The file specified in the dedicated instruction does not exist.	• Specify the existing file.	Display
0704h	Send queue full error	The queue for e-mail or FTP has become full.	• Reduce the frequency of e-mail or FTP transmission.	Display
0705h	Incorrect file name error	The file name includes inapplicable characters.	• Check the control data of the dedicated instruction.	Display
0709h	Simultaneous multiple access error	An attempt was made to access the file being used by the other instruction.	• Provide interlocks between the instructions that will access the same file. • Change the access target file name.	Display
070Bh	File open error	Failed to create a file.	• Check whether the CF card has a USER folder. • Check whether the USER folder of the CF card is write enabled.	Display
070Ch	Disk full	The disk has run out of a free area.	• Delete unnecessary files. • Replace the CF card.	Display
070Dh	Read start position fault	The read start position is beyond the file capacity.	• Check the argument of the read start position.	Display
070Eh	Read range fault	The read range is not within the file.	• Check whether the read start position + number of read points fall within the file range.	Display

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Error code	Error name	Error definition	Corrective action	Error type
070Fh	File access error	An error occurred when access was made to the file.	• Check whether the access target file was deleted by external FTP, etc. during execution of the instruction.	Display
07A0h	System error	—	• System error (∗1)	Display
0800h	FTP server setting file error	The FTP setting file is missing or destroyed.	• After initializing the module (refer to Section 4.13), perform the FTP setting (refer to Section 6.7.3) again.	Stop
0801h	Incorrect FTP transfer destination No. error	The FTP transfer destination No. is outside the setting range.	• Check the FTP transfer destination No. of the logging setting (refer to Section 6.4.4) or dedicated instruction (refer to Section 8.3, 8.4).	Continue
0802h	FTP transfer destination No. non-setting error	A file send request was issued to the FTP transfer destination No. that has not been set in the FTP setting.	• Check the FTP transfer destination No. of the logging setting (refer to Section 6.4.4) or dedicated instruction (refer to Section 8.3, 8.4). • Check the FTP setting. (Refer to Section 6.7.3)	Continue
0803h	FTP file transfer error	An error occurred during FTP file transfer or the file of the transfer source is missing.	• Check the FTP setting. (Refer to Section 6.7.3.) • Check the connection status with the FTP server. • Check the FTP server status of the transfer destination. • Check the transmission file specified in the dedicated instruction. (Refer to Section 8.3, 8.4.) • Check whether the transfer source file is deleted. • Check the logging setting. (Refer to Section 6.7.6 (3).)	Continue

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Error code	Error name	Error definition	Corrective action	Error type
0804h	FTP server control port connection error	Failed to connect to the control port of the FTP server.	• Check the FTP setting. (Refer to Section 6.7.3) • Check the network connection status by the PING test. (Refer to Section 6.11) • Check the FTP server status of the transfer destination. • Power on the PLC a few minutes after power-off.	Continue
0805h	FTP server control port disconnection error	Failed to disconnect the FTP server control port.	• Check the connection with the FTP server. • Check the FTP server status of the transfer destination.	Continue
0806h	FTP server login error	Failed to login to the FTP server.	• Check the FTP setting. (Refer to Section 6.7.3) • Check the connection with the FTP server. • Check the FTP server status of the transfer destination.	Continue
0807h	FTP server command excute error	Failed to execute the FTP command to the FTP server.	• Check the connection with the FTP server. • Check the FTP server status of the transfer destination. • Check that the FTP server of the transfer destination has write authority.	Continue
0808h	FTP server data transferport connection error	Failed to connect to the data transfer port of the FTP server.	• Check the FTP setting. (Refer to Section 6.7.3) • Check the connection with the FTP server. • Check the FTP server status of the transfer destination.	Continue
0809h	FTP server data transfer port disconnection error	Failed to disconnect the FTP server data transfer port.	• Check the connection with the FTP server. • Check the FTP server status of the transfer destination.	Continue
080Ah	FTP file transfer not allowed	In switch setting, an FTP file transfer request was issued during default operation.	• Reset the default operation setting of the switch setting. (Refer to Section 4.7)	Continue
0810h	E-mail setting file error	The e-mail setting file is missing or destroyed.	• After initializing the module (refer to Section 4.13), perform the e-mail setting (refer to Section 6.6.3) again.	Stop

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Error code	Error name	Error definition	Corrective action	Error type
0811h	Incorrect e-mail address No. error	The e-mail address No. is outside the setting range.	• Check the e-mail address No. of the logging setting (refer to Section 6.4.4), event setting (refer to Section 6.5.3) or WMSEND instruction (refer to Section 8.2).	Continue
0812h	E-mail address No. non-setting error	An e-mail sending request was issued to the e-mail address No. that has not been set in the e-mail setting.	• Check the e-mail address No. of the logging setting (refer to Section 6.4.4), event setting (refer to Section 6.5.3) or WMSEND instruction (refer to Section 8.2). • Check the e-mail setting. (Refer to Section 6.6.3)	Continue
0813h	E-mail transmission error	An error occurred during e-mail transmission.	• Check the e-mail setting. (Refer to Section 6.6.3) • Check the connection with the mail server. • Check the mail server status of the send destination. • Select "POP before SMTP" in the e-mail setting. (Refer to Section 6.6.3.)	Continue
0814h	No attached file error	The specified attached file is missing.	• Check the specification of the attached file in the WMSEND instruction. (Refer to Section 8.2) • Check that the attached file has not been deleted. • Check the logging setting. (Refer to Section 6.6.5 (3).)	Continue
0815h	SMTP server login error	Failed to connect to the mail server (SMTP server).	• Check the E-mail setting. (Refer to Section 6.6.3) • Check the connection with the mail server. • Check the mail server status of the send destination. • Power on the PLC a few minutes after power-off.	Continue
0816h	E-mail header send error	Failed to send the e-mail header.	• Check the connection with the mail server. • Check the mail server status of the send destination.	Continue

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Error code	Error name	Error definition	Corrective action	Error type
0817h	E-mail main text send error	Failed to send the e-mail main text.	• Check the connection with the mail server. • Check the mail server status of the send destination.	Continue
0818h	Attached file send error	Failed to send the attached file.	• Check the connection with the mail server. • Check the mail server status of the send destination. • Check the logging setting. (Refer to Section 6.6.5 (3).)	Continue
0819h	SMTP server logout error	Failed to disconnect from the mail server (SMTP server).	• Check the connection with the mail server. • Check the mail server status of the send destination.	Continue
081Ah	E-mail sending not possible	In switch setting, an e-mail sending request was issued during default operation.	• Reset the default operation setting of the switch setting. (Refer to Section 4.7)	Continue
081Bh	POP server login error	Failed to connect to the mail server (POP server).	• Check the e-mail setting. (Refer to Section 6.3.3) • Check the connection with the mail server. • Power on the PLC a few minutes after power-off.	Continue
0820h	Address notification setting file error	The address notification setting file is missing or destroyed.	• After initializing the module (refer to Section 4.13), perform the address notification setting (refer to Section 6.9.2) again.	Stop
0830h	System setting file error	The system setting file is missing or destroyed.	• After initializing the module (refer to Section 4.13), perform the system setting (refer to Section 4.6.3) again.	Stop
0831h	Account setting file error	The account setting file is missing or destroyed.	• After initializing the module (refer to Section 4.13), perform the account setting (refer to Section 4.6.5) again.	Stop

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Error code	Error name	Error definition	Corrective action	Error type
08A0h 08A1h 08A2h 08A3h 08B0h 08B1h 08C0h	System error	—	• System error (*1)	Stop
0900h 0901h				Display
0902h	Non-set item error	An item that has not been set was specified.	• Check the setting and execute again.	Display
0903h	Write authority error	The user who does not have write authority attempted to write.	• Log in with the account with write authority, and execute again.	Display
0904h	Outside setting range error	A value outside the setting range was specified.	• Check the setting and execute again.	Display
0905h	No specified component error	The component specified in the data does not exist.	• Check the setting and execute again.	Display
0906h	Device specification error	An incorrect device (that cannot be handled) was specified.	• Check the setting and execute again.	Display
0907h	Device write disable (device test) error	Execution of the device test was attempted when Device write disable request (YA) is on.	• Turn off Device write disable request (YA) and execute again.	Display
0908h	Device write disable (tag component test) error	Execution of the tag component test was attempted when Device write disable request (YA) is on.	• Turn off Device write disable request (YA) and execute again.	Display
0909h	Write disable setting (tag component test) error	Execution of the tag component test when "Disable" was set to "Data write" in the tag setting.	• Set "Enable" to "Data write" in the tag setting and execute again. (Refer to Section 6.3.3)	Display
09A0h	System error	—	• System error (*1)	Stop
0A00h				Display
0A01h	Access log open error	Failed to open the access log.	• Check File access status (X2). • Execute File access stop cancel (Y3). (Refer to Section 3.6.2.)	Display
0A02h	Access log read error	Failed to read the access log.	• Check File access status (X2). • Execute File access stop cancel (Y3). (Refer to Section 3.6.2.)	Display
0A03h	Access log registration error	Failed to register the access log.	• Check File access status (X2). • Execute File access stop cancel (Y3). (Refer to Section 3.6.2.)	Display
0A04h	Access log close error	Failed to close the access log.	• Check File access status (X2). • Execute File access stop cancel (Y3). (Refer to Section 3.6.2.)	Display

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Error code	Error name	Error definition	Corrective action	Error type
0A05h	Access log initialization error	Failed to initialize the access log.	• Check File access status (X2). • Execute File access stop cancel (Y3). (Refer to Section 3.6.2.)	Display
0A06h	Illegal access log error	The access log is corrupted.	• Check File access status (X2). • Execute File access stop cancel (Y3). (Refer to Section 3.6.2.)	Display
0A07h	Out-of-range setting file access error	Access was made to outside the setting file range.	• Check File access status (X2). • Execute File access stop cancel (Y3). (Refer to Section 3.6.2.)	Display
0A08h	New setting file creation error	Failed to create a new setting file.	• Check File access status (X2). • Execute File access stop cancel (Y3). (Refer to Section 3.6.2.)	Display
0A09h	Setting file update error	Failed to update the setting file.	• Check File access status (X2). • Execute File access stop cancel (Y3). (Refer to Section 3.6.2.)	Display
0A0Ah	Setting file seek error	Failed to seek the setting file.	• Check File access status (X2). • Execute File access stop cancel (Y3). (Refer to Section 3.6.2.)	Display
0A0Bh	Setting file close error	Failed to close the setting file.	• Check File access status (X2). • Execute File access stop cancel (Y3). (Refer to Section 3.6.2.)	Display
0A0Ch	Device specification error	An incorrect device (that cannot be handled) was specified in the component setting.	• Check the device in the component setting. (Refer to Section 6.3.3)	Display
0A0Dh	Device consistency error	Bits were specified for a word device or any other than bits were specified for a bit device.	• Check the data type of the component setting. (Refer to Section 6.3.3)	Display
0A0Eh	Same account error	The account of the same name already exists.	• Specify another user name. (Refer to Section 4.6.5)	Display
0A0Fh	No administrator authority error	Deletion of the last user account with administrator authority was attempted.	• Enter at least one more user account with administrator authority before deletion. (Refer to Section 4.6.5)	Display
0A10h	Same logging file name error	The logging file of the same name already exists.	• Specify another logging file name.	Display
0A11h	Excessive number of device points for high speed sampling tag	The total device points of the high speed sampling tag exceeds 96 points.	• Check the component setting of the high speed sampling tag (refer to Section 6.3.3), and make setting so that the total device points do not exceed 96 points.	Display

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Error code	Error name	Error definition	Corrective action	Error type
0A12h	Duplicate high speed sampling tag specification error	The high speed sampling tag is already set.	• After deleting the already set high speed sampling tag, set it again.	Display
0A13h	High speed sampling tag CPU specification error	The component of other than the access target CPU setting No. 1 exists in the high speed sampling tag.	• Check the component setting. (Refer to Section 6.3.3)	Display
0A14h	Duplicate high speed logging specification error	The high speed logging is already set.	• After deleting the already set high speed logging, set it again.	Display
0AA0h	System error	—	• System error (*1)	Stop
0B00h	Parameter error	The parameter setting of the user part is incorrect.	• Check the parameter setting of the user part.	Display
0B01h	Communication part error	No communication part is provided or a applet part is described before a communication part.	• Describe only one communication part in HTML before applet parts.	Display
0B02h	No setting error	Tag monitor was displayed with no tag setting, or logging monitor was displayed with no logging setting.	• Perform tag setting. (Refer to Section 6.3.3) • Perform logging setting. (Refer to Section 6.4.4)	Display
0B03h	Type check error	The data type of the component specified in the user part is incorrect.	• Check the setting of the component specified in the user part.	Display
0B04h	No file error	The logging file does not exist or the event history file does not exist.	• Check that the logging file has not been deleted by FTP. • Check that the logging file has not been deleted due to excessive number of saved files. • Execute history clear from the event setting and create the event history file again.	Display
0B05h	File download error	An error occurred during downloading of the file.	• Check the network connection status by the PING test. (Refer to Section 6.11) • Check the power supply of the modem, cable and line status.	Display
0B06h	Incomplete parameter setting error	The parameters that must be set in the user part have not been set.	• Add the parameters.	Display
0B07h	Audio error (Not occurs when using Microsoft© VM)	There is no audio replay hardware, or hardware does not respond.	• Use a personal computer with audio replay hardware built-in. • Replace the audio replay hardware.	Display

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Error code	Error name	Error definition	Corrective action	Error type
0B08h	Audio file format error	An audio file of incompatible format was specified.	• Specify a WAV or AU format audio file. • For use of Microsoft® VM, specify an AU format audio file. • For specification of a WAV format audio file, use the Sun Microsystems Inc. Java VM. • Specify an audio file encoded in PCM format.	Display
		The audio file size exceeds 1MB.	• Specify an audio file of 1MB or less.	Display
		More than 32 audio files have been specified.	• Specify 32 audio files or less.	Display
		The audio file is corrupted. (Unable to detect this when using Microsoft® VM)	• Replace it with a normal audio file.	Display
0B09h	Same file specification error	When using Microsoft® VM, an audio part of the same file name is specified in multiple audio parts.	• Specify an audio file of a different file name. • To specify an audio file of the same file name, use Java VM of Sun Microsystems Inc.	Display
		Before the monitor screen was displayed completely, the screen update was performed.	• Wait until the monitor screen is displayed completely.	Display
0B10h	String format error	The form of the data being monitored is incorrect.	• Check the setting of the component specified in the user part.	Display
0B11h	Outside device range error	The device No. is outside the range.	• Confirm the device No. in the tag setting and execute again. • Confirm the number of device points of the access target CPU and execute again.	Display
0B12h	Unsupported device error	Unsupported device was specified.	• Confirm the device name in the tag setting and execute again. • Confirm the device supported by the access target CPU and execute again.	Display
0B23h	Communication error	An error occurred during communication.	• Check the network connection status by the PING test. (Refer to Section 6.11) • Check the power supply of the modem, cable and line status. • Reexamine the Java VM installation status. (Refer to Section 3.1, Remarks (3) (c).)	Display
0B24h	Incorrect packet error	The communication packet is corrupted.	• Check the network connection status by the PING test. (Refer to Section 6.11) • Check the power supply of the modem, cable and line status.	Display
0B25h	Communication parts parameter error	The set value for the parameter "INTERVAL" of the communication part is wrong or out of the range.	• Check the set value for the parameter "INTERVAL" of the communication part. (Refer to Section 7.2.1)	Display

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Error code	Error name	Error definition	Corrective action	Error type
100Eh 2000h to 20FFh	System error	—	• System error (*1)	Continue
4000h to 4FFFh	Errors detected by the access target CPU Refer to the user's manual of the access target CPU module.			Continue
9000h 9006h	System error	—	• System error (*1)	Display
9008h	Send buffer full	No send buffer is available.	• Check the CPU in the access path.	Display
9202h 9204h 920Ah 9920h 9922h 9923h	System error	—	• System error (*1)	Continue
9E20h	Processing code error	The issued processing code cannot be processed by the target.	• Check the CPU in the access path.	Continue
9E81h	Device type error	The device type specified for the access target station is Invalid.	• Check the device type input in the device monitor or component setting.	Continue
9E82h	Device number error	The device number specified for the access target station is outside the range.	• Check the device number input in the device monitor or component setting.	Continue
9E83h	Number of device points error	The number of device points specified for the access target station is outside the range.	• Check the device number input in the device monitor or component setting.	Continue
B000h to BFFFh	Errors detected in the CC-Link system Refer to the CC-Link system master/local module user's manual.			Continue
C000h to CFFFh	Errors detected in the Ethernet interface module Refer to the Ethernet interface module user's manual.			Continue
F000h to FEFFh	Errors detected in the MELSECNET/H, MELSECNET/10 network system Refer to the MELSECNET/H, MELSECNET/10 network system reference manual.			Continue
FFD0h	System error	—	• System error (*1)	Continue
FFD1h	Monitor condition dissatisfied error	Data cannot be read since the monitor condition is not satisfied.	• Delete the monitor condition using GX Developer.	Continue

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Error code	Error name	Error definition	Corrective action	Error type
FFD2h FFD3h FFD4h	System error	—	• System error (*1)	Continue
FFD5h	ROM operation error	T/C set values were written to the PLC CPU during ROM operation.	• Change the T/C set values during RAM operation.	Continue
FFD6h FFD7h FFD9h FFDAh FFDBh FFDCh FFDDh FFDEh	System error	—	• System error (*1)	Continue
FFDFh	Incorrect access target error	The setting of the access target CPU is incorrect.	• Check the access target CPU setting. (Refer to Section 4.6.7)	Continue
FFE0h FFE1h FFEDh FFEEh FFEFh	System error	—	• System error (*1)	Continue
FFF0h	Station No., network number error	The station No. or network number is outside the range or has been set incorrectly.	• Check the station No. or network number of the access target CPU setting. (Refer to Section 4.6.7)	Continue
FFF1h	System error	—	• System error (*1)	Continue
FFF2h	Memory cassette error	The memory cassette has not been set to the accessed CPU module, or an improper memory cassette has been set.	• Confirm the memory cassette of the access target CPU.	Continue
FFF3h	Write protect error	The specified block No. of the extension file register overlaps the write protect area of the memory cassette.	• Check the block No. (device type) of the extension file register. • Check the write protect DIP switch of the memory cassette in the access target CPU.	Continue
FFF4h	Block error	The specified block No. of the extension file register is Invalid.	• Check the block No. (device type) of the extension file register.	Continue
FFF5h FFF8h FFFAh	System error	—	• System error (*1)	Continue
FFFBh	Size error	The device is outside the device range.	• Check the device number input in the device monitor or component setting.	Continue

(Continued on the next page)

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(From the previous page)

Error code	Error name	Error definition	Corrective action	Error type
FFFCh	CPU error	An Invalid station was specified.	• Check the setting of the network module on the access route. • Check the setting of the station No. in the access target CPU setting. (Refer to Section 4.6.7)	Continue
FFFDh	Device type error	The device type is incorrect.	• Check the device type input in the device monitor or component setting.	Continue
FFFEh	Device number error	The device number is incorrect.	• Check the device number input in the device monitor or component setting.	Continue
FFFFh	System error	—	• System error (*1)	Continue

*1 The possible cause is a system error of the Web server module.
Please consult your local Mitsubishi service center or representative, explaining a detailed description of the problem.
*2 Conduct the hardware test again. (Refer to Section 4.8.3)
If the error occurs again, the possible cause is a system error of the Web server module.
Please consult your local Mitsubishi service center or representative, explaining a detailed description of the problem.
*3 The possible cause is a hardware fault of the Web server module.
Please consult your local Mitsubishi service center or representative, explaining a detailed description of the problem.

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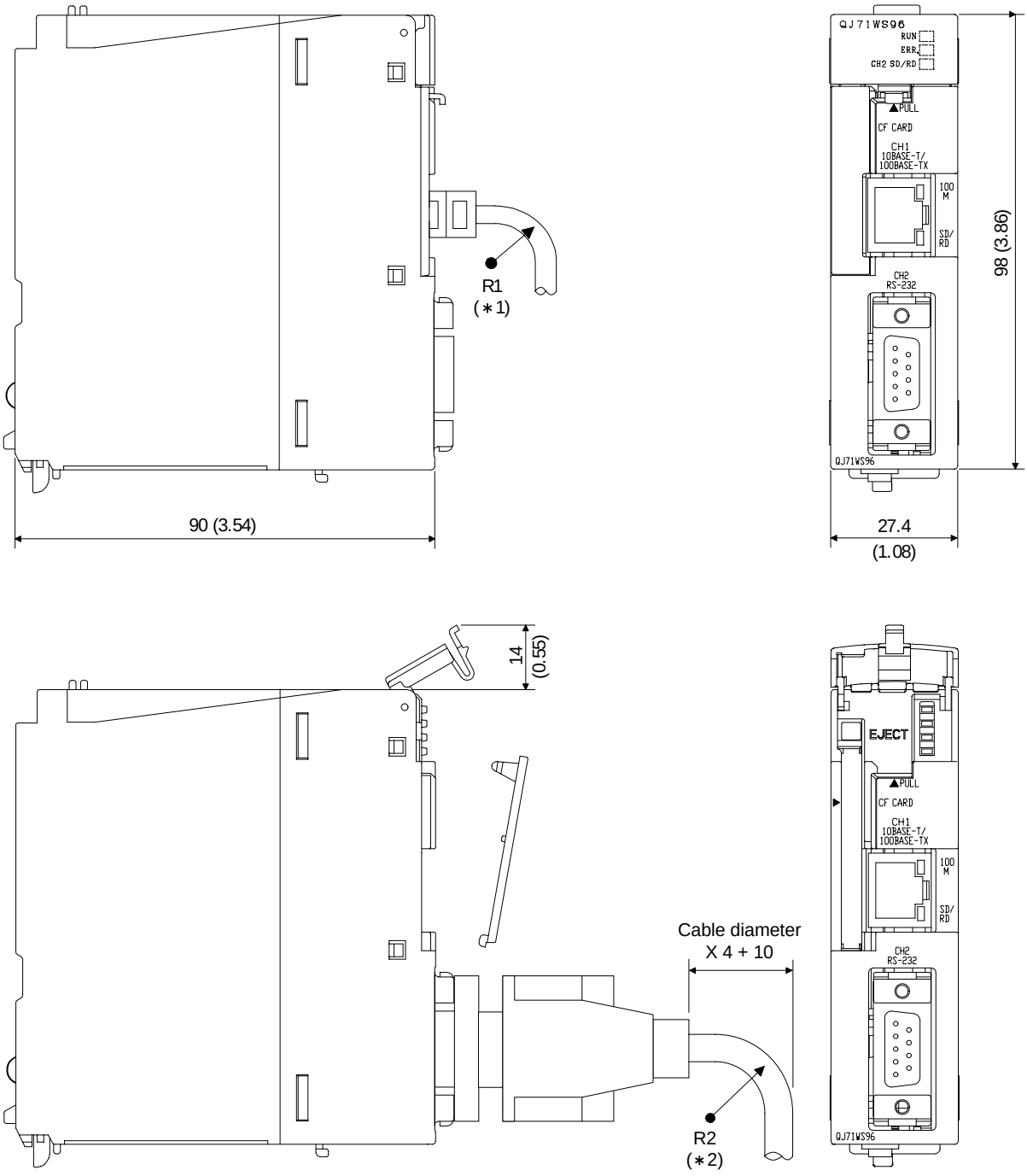
APPENDIX

Appendix 1 External Dimensions



(Unit: mm (in.))

*1 The bending radius near the connectors (reference value: R1) should be four times as long as the cable's outside diameter or more when connecting the twisted pair cable.

*2 The bending radius near the connectors (reference value: R2) should be four times as long as the cable's diameter or more when connecting the RS-232 cable.

App.

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Appendix 2 Accessible Devices and Ranges

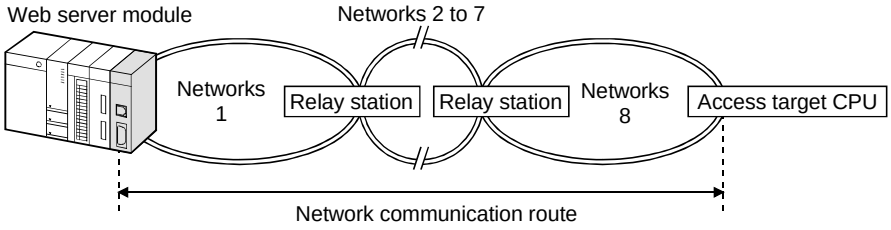
This section provides information on the accessible devices and accessible ranges.

(1) Accessible PLC CPU

PLC series	Model Name
QCPU (Q mode)	Q00JCPU, Q00CPU, Q01CPU, Q02CPU, Q02HCPU, Q06HCPU, Q12HCPU, Q25HCPU, Q12PHCPU, Q25PHCPU
QnACPU	Q2ACPU, Q2ACPU-S1, Q2ASCPU, Q2ASCPU-S1, Q2ASHCPU, Q2ASHCPU-S1, Q3ACPU, Q4ACPU, Q4ARCPU
QCPU (A mode)	Q02CPU-A, Q02HCPU-A, Q06HCPU-A
ACPU	A1NCPU, A0J2HCPU, A1SCPU, A1SCPU-S1, A1SHCPU, A1SJCPU, A1SJHCPU, A2CCPU, A2CJCPU, A2NCPU, A2NCPU-S1, A2SCPU, A2SCPU-S1, A2SHCPU, A2SHCPU-S1, A1FXCPU, A2ACPU, A2ACPU-S1, A2UCPU, A2UCPU-S1, A2USCPU, A2USCPU-S1, A2ASCPU, A2ASCPU-S1, A2ASCPU-S30, A2USHCPU-S1, A3NCPU, A3ACPU, A3UCPU, A4UCPU

(2) Accessible routes

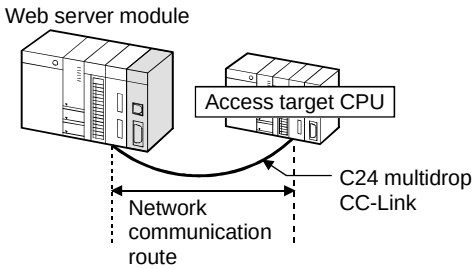
(a) Single network



- Network indicates NET/10(H) or Ethernet.
- Relay station is the QCPU.

Network communication route	Access target CPU (PLC series)		
	QCPU (Q mode)	QnACPU	QCPU (A mode), ACPU
NET/10 (H)	○	○	○
Ethernet	○ (∗1)	○ (∗1) (∗2)	×

○ : Accessible × : Inaccessible

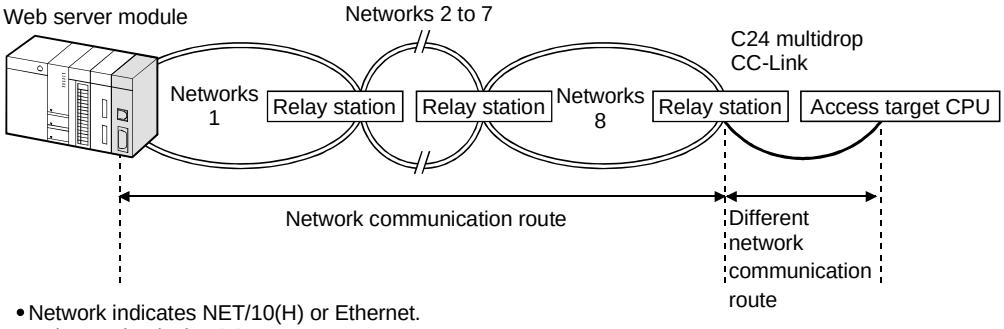


Network communication route	Access target CPU (PLC series)		
	QCPU (Q mode)	QnACPU	QCPU (A mode), ACPU
CC-Link	○	○ (∗3)	○ (∗3)
C24	○	○	×

○ : Accessible × : Inaccessible

App.

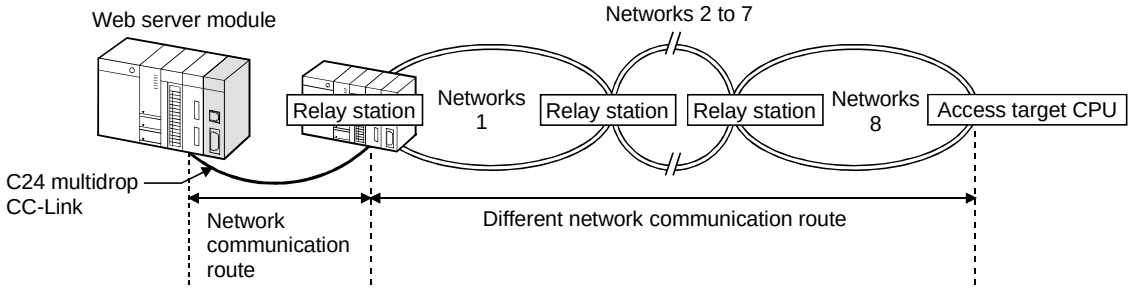
(b) Different network



- Network indicates NET/10(H) or Ethernet.
- Relay station is the QCPU.

Network communication route	Different network communication route	Access target CPU (PLC series)		
		QCPU (Q mode)	QnACPU	QCPU (A mode), ACPU
NET/10 (H), Ethernet	CC-Link	○	○ (∗3)	○ (∗3)
	C24	○	×	×

○ : Accessible × : Inaccessible



- Network indicates NET/10(H) or Ethernet.
- Relay station is the QCPU.

Network communication route	Different network communication route	Access target CPU (PLC series)		
		QCPU (Q mode)	QnACPU	QCPU (A mode), ACPU
CC-Link, C24	NET/10 (H)	○	×	×
	Ethernet	○ (∗1)	×	×

○ : Accessible × : Inaccessible

∗1 As the network number and station No., set the parameter values set in the access target CPU side Q series E71 or QE71.
Also set parameters in the "Station No. <-> IP information" of the Q series corresponding E71 or QE71.
At that time, specify any of the IP address computation system, table exchange system and use-together system as the "Station No. <-> IP information system".

∗2 Use the access target CPU side QnACPU or QE71 of 9707B (year and month of manufacture) or later.

∗3 Use the access target CPU side CC-Link master/local module of software version "S" or later.

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(3) Accessible device

Device ∗1 (Device name)		QCPU (Q mode)	QCPU (A mode)	QnACPU	ACPU
Function input (FX)		×	×	×	×
Function output (FY)		×	×	×	×
Function register (FD)		×	×	×	×
Special relay (SM) (M) ∗2		○	○	○	○
Special register (SD) (D) ∗3		○	○	○	○
Input relay (X)		○	○	○	○
Output relay (Y)		○	○	○	○
Internal relay (M) ∗9		○	○	○	○
Latch relay (L) ∗9		○	○	○	○
Annunciator (F)		○	○	○	○
Edge relay (V)		○	×	○	×
Link relay (B)		○	○	○	○
Data register (D)		○	○	○	○
Link register (W)		○	○	○	○
Timer	Contact (TS)	○	○	○	○
	Coil (TC)	○	○	○	○
	Current value (T/TN) ∗4	○	○	○	○
Counter	Contact (CS)	○	○	○	○
	Coil (CC)	○	○	○	○
	Current value (C/CN) ∗4	○	○	○	○
Retentive timer	Contact (SS)	○	×	○	×
	Coil (SC)	○	×	○	×
	Current value (ST/SN) ∗4	○	×	○	×
Special link relay (SB)		○	×	○	×
Special link register (SW)		○	×	○	×
Step relay (S) ∗9		×	○	×	○
Direct input (DX)		×	×	×	×
Direct output (DY)		×	×	×	×
Accumulator (A)		×	×	×	×
Index register	(Z)	○	×	○	×
	(V)	×	×	×	×
File register	(R)	○ ∗8	○	○	○
	(ZR)	○ ∗8	×	○	×
	(ERn\R)∗5∗10	×	○	×	○
Link direct device	Link input (Jn\X) ∗6	○	×	○	×
	Link output (Jn\Y) ∗6	○	×	○	×
	Link relay (Jn\B) ∗6	○	×	○	×
	Link special relay (Jn\SB) ∗6	○	×	○	×
	Link register (Jn\W) ∗6	○	×	○	×
	Link special register (Jn\SW) ∗6	○	×	○	×
Intelligent function module device	Buffer register (Un\G0) ∗7	○	×	○	×

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*1 The local devices and the file registers for individual programs of the Q/QnA series PLC CPU are not accessible by specifying the program name.
Do not use the local device and file registers for individual programs since correct read/write may not be available.
*2 Specify SM for the QCPU (Q mode)/QnACPU, or specify M9000 or later for the QCPU (A mode)/ACPU.
*3 Specify SD for the QCPU (Q mode)/QnACPU, or specify D9000 or later for the QCPU (A mode)/ACPU.
*4 The device name can be specified by using either symbol.
*5 Specify the block number for "n".
*6 Specify the network No. for "n".
*7 Specify the I/O number of the intelligent function module/special function module for "n".
*8 Not accessible when the Q00JCPU is used.
*9 The M, L and S devices are in the same area independently of the device setting in the parameters.
*10 ER0\R cannot be specified.

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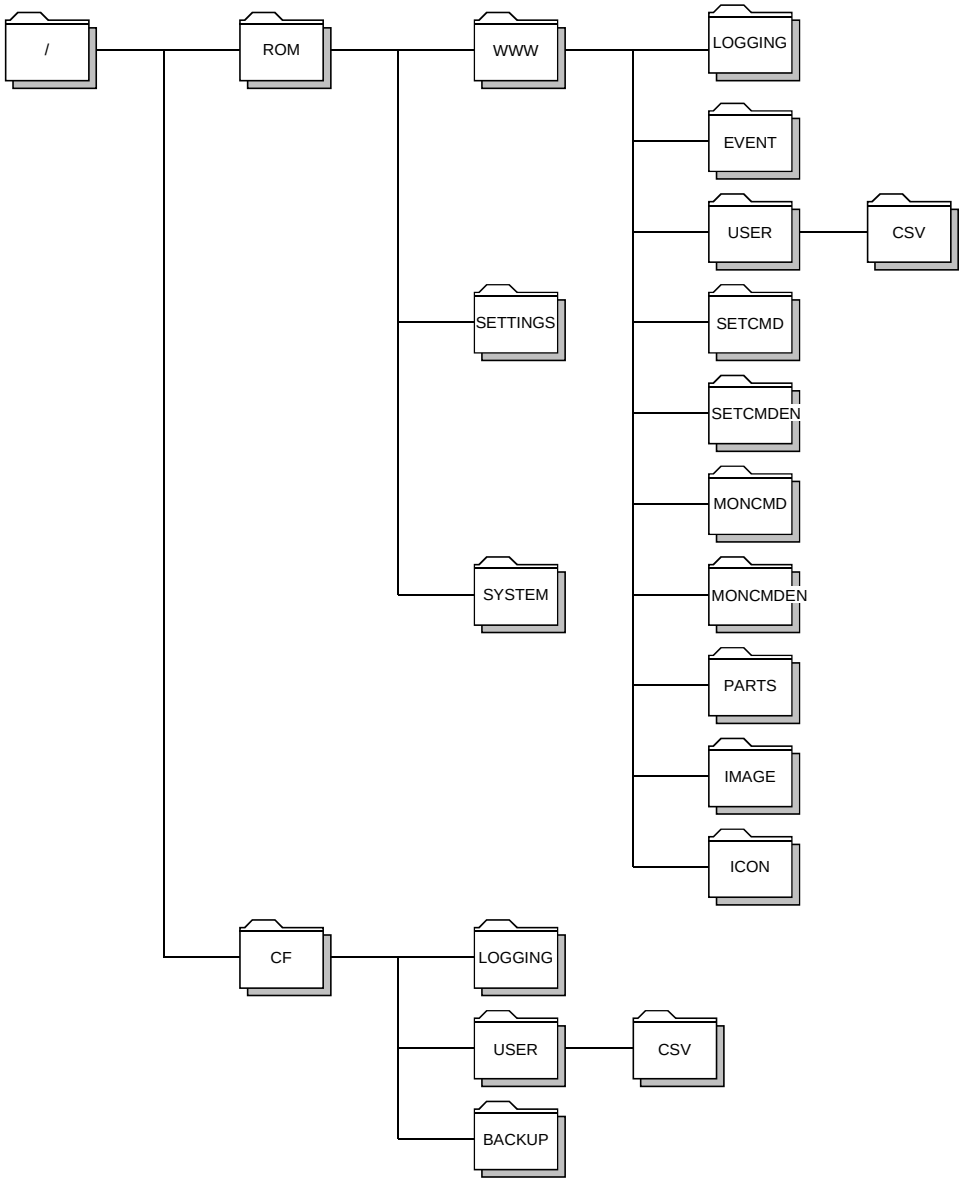
Appendix 3 Directory Structure

Data such as logging data or event historical data are stored as files in the standard ROM or Compact Flash™ card of the Web server module.
Each file is managed in directory unit, and the access authority is required for the user to access the directory file via Web or FTP. (*)

* For access via Web, users do not have to be conscious of the directory file.

(1) Directory structure

The following shows the directory structure of the Web server module.



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(2) Access authority by directory

The following table indicates the access authority by directory.

Directory Name	Description	With Administrator Authority				Without Administrator Authority			
		1)	2)	3)	4)	1)	2)	3)	4)
/	FTP route	×	○	×	×	×	○	×	×
/ROM/	Standard ROM	×	○	×	×	×	○	×	×
/WWW/	HTTP home directory top page storage directory	○	○	×	×	○	○	×	×
/LOGGING/	Logging data storage directory	○	○	○	○	○	○	○	×
/EVENT/	Event historical data storage directory	○	○	○	○	○	○	○	×
/USER/	User-created screen directory Under USER, directories can be created by the user. (The access authority to the created directories is the same as that to USER)	○	○	○	○	○	×	×	×
/CSV/	Setting information file storage directory	○	○	○	○	○	×	×	×
/SETCMD/	Setting HTML storage directory (Japanese)	○	×	×	×	×	×	×	×
/SETCMDEN/	Setting HTML storage directory (English)	○	×	×	×	×	×	×	×
/MONCMD/	Monitor screen HTML storage directory (Japanese)	○	×	×	×	○	×	×	×
/MONCMDEN/	Monitor screen HTML storage directory (English)	○	×	×	×	○	×	×	×
/PARTS/	Supplied parts (communication parts, display parts) storage directory	○	×	×	×	○	×	×	×
/IMAGE/	Image file storage directory	○	×	×	×	○	×	×	×
/ICON/	Icon storage directory	○	×	×	×	○	×	×	×
/SETTINGS/	Setting file storage directory	×	×	×	×	×	×	×	×
/SYSTEM/	System file storage directory	×	×	×	×	×	×	×	×
/CF/	Compact Flash™ card	×	○	×	×	×	○	×	×
/LOGGING/	Logging data storage directory	○	○	○	○	○	○	○	×
/USER/	User-created screen directory Under USER, directories can be created by the user. (The access authority to the created directories is the same as that to USER)	○	○	○	○	○	×	×	×
/CSV/	Setting information file storage directory	○	○	○	○	○	×	×	×
/BACKUP/	Standard ROM backup data storage directory	×	×	×	×	×	×	×	×

○ : Allowed × : Not allowed

1) Access by HTTP
2) Access by FTP (transfer to directory)
3) Reading file by FTP
4) Writing or deleting file by FTP

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Appendix 4 Applicable Characters and ASCII Code Tables by Setting Items

(1) ASCII code table

	0	1	2	3	4	5	6	7
0	NUL		(SP)	0	@	P	`	p
1			!	1	A	Q	a	q
2			"	2	B	R	b	r
3			#	3	C	S	c	s
4			$	4	D	T	d	t
5			%	5	E	U	e	u
6			&	6	F	V	f	v
7			'	7	G	W	g	w
8			(	8	H	X	h	x
9			)	9	I	Y	I	y
A			*	:	J	Z	j	z
B			+	;	K	[	k	{
C			,	<	L	\	l	|
D			-	=	M	]	m	}
E			.	>	N	^	n	~
F			/	?	O	_	o	

(2) ASCII characters (User name, password, server name, e-mail address, directory path, external device name, etc.)

Alphanumeric characters can be used.
(However, " (double quotation) is not available.)
The hatched area is available.
(Note that ":" (colon) must not be used in a user name.)

	0	1	2	3	4	5	6	7
0	NUL		(SP)	0	@	P	`	p
1			!	1	A	Q	a	q
2			"	2	B	R	b	r
3			#	3	C	S	c	s
4			$	4	D	T	d	t
5			%	5	E	U	e	u
6			&	6	F	V	f	v
7			'	7	G	W	g	w
8			(	8	H	X	h	x
9			)	9	I	Y	I	y
A			*	:	J	Z	j	z
B			+	;	K	[	k	{
C			,	<	L	\	l	|
D			-	=	M	]	m	}
E			.	>	N	^	n	~
F			/	?	O	_	o	

(3) File name, directory name

The ASCII characters other than \ / : , ; * ? " < > | can be used.
The hatched area is available.

	0	1	2	3	4	5	6	7
0	NUL		(SP)	0	@	P	`	p
1			!	1	A	Q	a	q
2			"	2	B	R	b	r
3			#	3	C	S	c	s
4			$	4	D	T	d	t
5			%	5	E	U	e	u
6			&	6	F	V	f	v
7			'	7	G	W	g	w
8			(	8	H	X	h	x
9			)	9	I	Y	I	y
A			*	:	J	Z	j	z
B			+	;	K	[	k	{
C			,	<	L	\	l	|
D			-	=	M	]	m	}
E			.	>	N	^	n	~
F			/	?	O	_	o	

(4) Phone number

#, *, -, 0 to 9, P and p can be used.
The hatched area is available.

	0	1	2	3	4	5	6	7
0	NUL		(SP)	0	@	P	`	p
1			!	1	A	Q	a	q
2			"	2	B	R	b	r
3			#	3	C	S	c	s
4			$	4	D	T	d	t
5			%	5	E	U	e	u
6			&	6	F	V	f	v
7			'	7	G	W	g	w
8			(	8	H	X	h	x
9			)	9	I	Y	I	y
A			*	:	J	Z	j	z
B			+	;	K	[	k	{
C			,	<	L	\	l	|
D			-	=	M	]	m	}
E			.	>	N	^	n	~
F			/	?	O	_	o	

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(5) Characters

(a) CPU name, Tag name, Component name and Comment display parts
All characters can be used.
(However, " (double quotation) is not available.)
(Also, "," (comma) is not available (with the exception of the comment display parts.))

(b) E-mail main text in the event setting, system name
All characters can be used. (However, " (double quotation) is not available.)

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Appendix 5 Improvement of Web Server Module Functions

This section explains the functions added to/changed from the old version by the improvement of the Web server module functions, and provides the precautions for replacing the old version with the new version.

Appendix 5.1 Functions added to/changed from old version

This section explains the functions added to/changed from the old version.

(1) Module with first 5 digits of serial No. 05112 or later

Added/Changed Function	Description	Reference Section
Network connection form	• The following network connection forms are available. 1) Connection via a router type ADSL modem 2) Connection via a bridge type ADSL modem + broadband router	Section 2.2
Connection component	• The following connection components are available. 1) ADSL modem in which the protocol is "PPPoE" or "PPPoA" 2) Broadband router 3) UPnP compatible 4) POP before SMTP compatible	Section 2.4
I/O signal details	• A change was made to clear the current error area (address: 140 to 145) of the buffer memory by turning on Error clear request (Y10).	Section 3.6.2
Buffer memory list	• The areas indicated in Section 3.7 (*1) were added.	Section 3.7, Section 3.8
System setting	• The following setting items were added. 1) The "Register the above port No. to the router's NAT" check box was added to the Web server setting. 2) "FTP server setting" 3) "System name setting" 4) "Network diagnosis setting" • The following setting items were changed. 1) The "Network type setting" setting field was moved to the top. 2) "Connecting through LAN." was changed to "Connecting through LAN or the router".	Section 4.6.3
Account setting	• "Initial screen" was added to the setting item. • "Access authority: Write" was divided into "Device write" and "Tag component write".	Section 4.6.5
IP filter setting	• This setting screen was added.	Section 4.6.6
Access target CPU setting	• "Different network communication route" was added as a setting item.	Section 4.6.7
Intelligent function module switch setting	• A change was made to make the default operation setting (Bit 1 of Switch 2) valid for "IP filter setting". • The logging monitor setting (Bit 4 of Switch 2) was added.	Section 4.7

(Continued on the next page)

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Added/Changed Function	Description	Reference Section
Logging monitor	• The following items were added. 1) "Open file" button 2) The "Points" pull-down menu was added to the graph display • A change was made to automatically set the upper and lower scale values. • A change was made not to display the last update time of the file in the file specifying field. When it is desired to display the last update time of the file, make logging monitor setting. (Refer to Section 4.7 (2).)	Section 6.2.3
Self-diagnostics monitor	• This monitor screen was added.	Section 6.2.6
Tag setting	• The "Execute at high speed" radio button was added to the sampling setting.	Section 6.3.3
Logging setting	• The following setting items were added. 1) The "Same as the tag sampling interval" radio button was added to Timing. 2) "Condition for Start" and "Condition for Stop" 3) "Saved file names" • The following setting items were changed. 1) "Logging specification, Time/Interval" was changed to "Timing".	Section 6.4.4
Event setting	• The following setting items were added. 1) "Send to" was added to Mail setting for event occurrence. 2) "Disconnect from the network after sending mail" was added to Mail setting for event occurrence. • The following setting items were changed. 1) The No. of CPU event historical data was changed from 16 to 64. 2) The No. of tag event historical data was changed from 16 to 256. 3) From the common setting, E-mail destination specification were moved to the CPU event setting, Tag event setting and Time/Interval event setting. The number of e-mail destinations was changed from "Within 3 common destinations" to "Within 16 destinations for each event setting screen". 4) A change was made to enter the "Trigger value, Restoration value" of the tag event setting according to the data type.	Section 6.5.3
E-mail setting	• "Option setting" was added.	Section 6.6.3
Address notification setting	• The "Notify the global IP address obtained from the router" radio button was added. • "Use the default HTTP port number (80)" was changed to "Notify the HTTP port number set in the "System setting" screen".	Section 6.9.2(1)
E-mail notification setting	• "Notify an IP address at dial-up" was changed to "Notify an IP address at network connection.".	Section 6.9.2(2)
FTP notification setting	• "Option setting" was added. • "Notify an IP address at dial-up" was changed to "Notify an IP address at network connection.".	Section 6.9.2(3)
Data management	• "CSV export, CSV import" was added.	Section 6.10.4

(Continued on the next page)

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(From the previous page)

Added/Changed Function	Description	Reference Section
User screen creation function	• The following applet parts were added. 1) Write button parts 2) Device monitor parts 3) Tag data monitor parts 4) Logging monitor parts 5) Event history monitor parts 6) PLC diagnostics monitor part 7) Self-diagnostics monitor parts • The following SSI parts were added. 1) SSI read parts • The following CGI parts were added. 1) CGI write parts 2) CGI read parts 3) Disconnect parts • The following user parts were changed. 1) Some parameters of the user parts were changed to the items that must be set. (Error occurs if not set) Refer to Appendix 5.2 for the parameters that must be set. 2) In the data block parts, a change was made to enable write to a tag component (parameters WRITE, LANGUAGE were added). 3) "APLCOLOR" was added to the parameters of the graphic display parts.	Chapter 7 Appendix 5.2
Dedicated instruction	• The following dedicated instructions were added. 1) FTPGET instruction 2) WFWRITE instruction 3) WFREAD instruction 4) WFDEL instruction • The following dedicated instructions were changed. 1) A change was made to enable a user data file to be specified as an attached file in the WMSEND instruction. 2) A change was made to enable a user data file to be specified as a transferred file in the FTPPUT instruction.	Chapter 8

(2) Module with first 5 digits of serial No. 07042 or later

Added/Changed Function	Description	Reference Section
User screen creation function	• The following applet parts were added. 1) Audio parts	Chapter 7.2.6

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Appendix 5.2 Precautions for replacing the old version with the new version

This section provides the precautions for replacing the module whose first 5 digits of serial No. are 05111 or earlier with the one whose first 5 digits of serial No. are 05112 or later.

(1) Restoration of setting information file

The setting information file of the module with first 5 digits of serial No. 05111 or earlier can be restored to the module with first 5 digits of serial No. 05112 or later. However, the setting information file of the module with first 5 digits of serial No. 05112 or later can not be restored to the module with first 5 digits of serial No. 05111 or earlier. (An error will occur if such restoration is executed.)

(2) User part parameters that must be set

On the module with first 5 digits of serial No. 05112 or later, the following parameters of the user parts have been changed to the items that must be set. When using the following user parts, be sure to set the following parameters. An error will occur unless any of them is set.

Part name	Parameter that must be set	Initial value of module with first 5 digits of serial No. 05111 or earlier (*1)
Data block parts	TAGNO, ELMNO1 to ELMNO64 (*2)	1
Level display parts	TAGNO, ELMNO	1
Graphic display parts	TAGNO, ELMNO	1
	RANGENO (*3)	1
	LOW1 to LOW5	0
	HIGH1 to HIGH5	1
	PICTURE1 to PICTURE5	File not set (not displayed)
Comment display parts	TAGNO, ELMNO	1
	RANGENO (*4)	1
	LOW1 to LOW5	0
	HIGH1 to HIGH5	1
	CMT1 to CMT5	File not set (not displayed)
Historical graph display parts	LOGNO	1
	GRAPHNO (*5)	1
	ELMNO1 to ELMNO5	1
Historical data display parts	LOGNO	1
	XNO (*6)	1
	ELMNO1 to ELMNO10	1

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*1 When the above user parts are used on the module whose first 5 digits of serial No. are 05111 or earlier, they operate with the initial values indicated above.

*2 Be sure to set ELMNO1. Failure to do so will result in an error. Set ELMNO1 to ELMNO64 consecutively. Failure to do so will result in an error.

*3 Be sure to set LOWs, HIGHs and PICTUREs as many as the quantity specified at RANGENO. Failure to do so will result in an error.

*4 Be sure to set LOWs, HIGHs and CMTs as many as the quantity specified at RANGENO. Failure to do so will result in an error.

*5 Be sure to set ELMNOs as many as the graph lines specified at GRAPHNO. Failure to do so will result in an error.

*6 Be sure to set ELMNOs as many as the quantity specified at XNO. Failure to do so will result in an error.

(3) Deletion of temporary Internet files

When the Web server module has been replaced, delete the temporary Internet files (cache) and then make access to the Web server module.

(Refer to Section 6.2.7 (1) for how to delete the temporary Internet files.)

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Appendix 6 Setting Information File Formats

This section explains the setting information file formats used for the CSV export/import function.
When editing a setting information file using a spreadsheet software, etc., change the setting items according to the corresponding setting information file format indicated in this section.
Refer to Section 6.10.3 for the CSV export/import function.

Appendix 6.1 Setting information file list and storage area

(1) Setting information file list

The following table lists the CSV exported/imported setting information files.

File name	Description
SYSTEM. CSV	System setting
DIALUP. CSV	Dial-up setting
CPU. CSV	Access target CPU setting
TAG. CSV	Tag setting
COMPONENT. CSV	Tag setting - Component setting
LOGGING. CSV	Logging setting
FTP. CSV	FTP setting
EMAIL. CSV	E-mail setting
EVENT. CSV	Event setting - Common setting
CPUEVT. CSV	Event setting - CPU event setting
TAGEVT. CSV	Event setting - Tag event setting
TIMEEVT. CSV	Event setting - Time/Interval event setting
ADDRESS. CSV	Address notification setting
ACCOUNT. CSV	Account setting
IPFILTER. CSV	IP filter setting

(a) When CSV export is executed, all the above setting information files are exported to the standard ROM or Compact Flash™ card.

(b) When CSV import is executed, all the above setting information files are imported from the standard ROM or Compact Flash™ card.
Note that when CSV import is executed, all the above setting information files must exist. (If any one is lacking, an error will result.)

(2) Setting information file storage area

As the setting information file storage area, select either the standard ROM or Compact Flash™ card when executing CSV export/import.
When CSV export is executed, the setting information files are exported to the selected storage area.
When CSV import is executed, the setting information files are imported from the selected storage place.

Storage area selection	Setting information file storage area
When "Standard ROM" is selected	/ROM/WWW/USER/CSV/
When "Compact Flash card" is selected	/CF/USER/CSV/

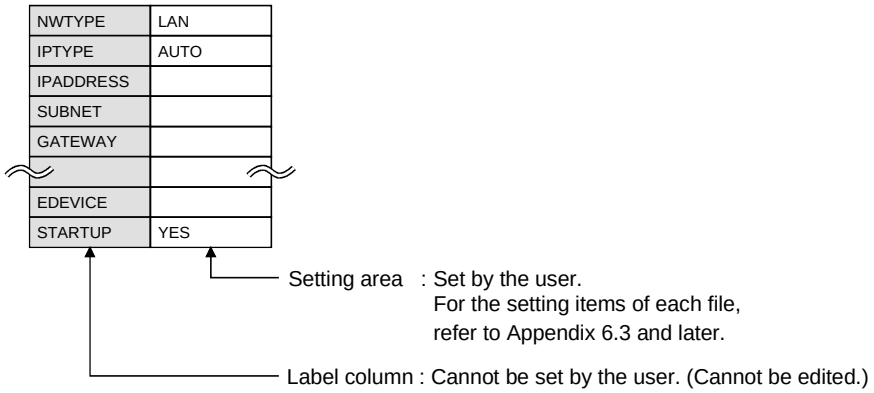
Appendix 6.2 Setting information file formats and editing precautions

This section explains the setting information file formats and editing precautions. The examples given in this section assume that setting information files are displayed on a spreadsheet program.

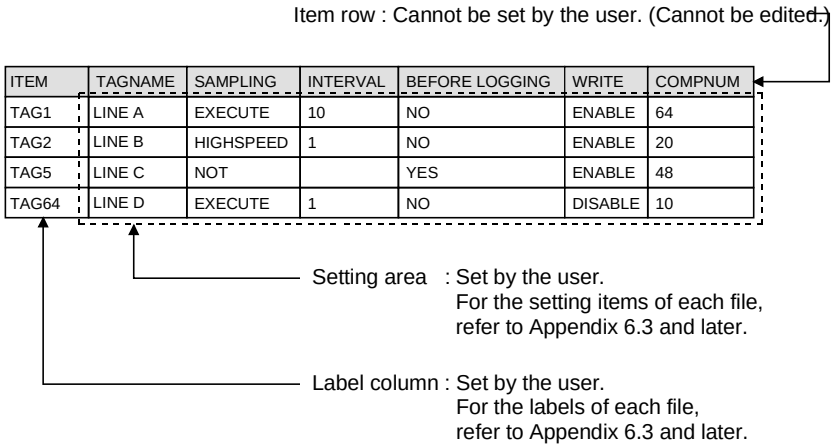
(1) Setting information file formats

There are two different setting information file formats: one consisting of a label column and setting area and the other consisting of a label column, item row and setting area.

(a) Format consisting of label column and setting area

Item	Description
File format	
Applicable file	SYSTEM. CSV, DIALUP. CSV, EMAIL. CSV, EVENT. CSV, ADDRESS. CSV, IPFILTER. CSV

(b) Format consisting of label column, item row and setting area

Item	Description
File format	
Applicable file	CPU. CSV, TAG. CSV, COMPONENT. CSV, LOGGING. CSV, FTP. CSV, CPUEVT. CSV, TAGEVT. CSV, TIMEEVT. CSV, ACCOUNT. CSV

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(2) Precautions for editing a setting information file

(a) Space

All spaces are regarded as part of the item.
An error will occur if a space is used in an inapplicable setting item.

(b) Upper case/lower case

The setting information files are case-sensitive.

(c) Special characters

1) "Line feed"

When entering a "Line feed", type "\n".
(Example) An error occurred in Line A. \nTake corrective action.

2) "\" sign

When entering "\", type "\\".

3) "," (Comma)

When entering a ",", enclose an entire item with double quotation marks.
(When EXCEL is used, however, it is not necessary since double quotation marks are automatically added when a file is saved in CSV format.)
(Example) "As the temperature was abnormal, the machine stopped"

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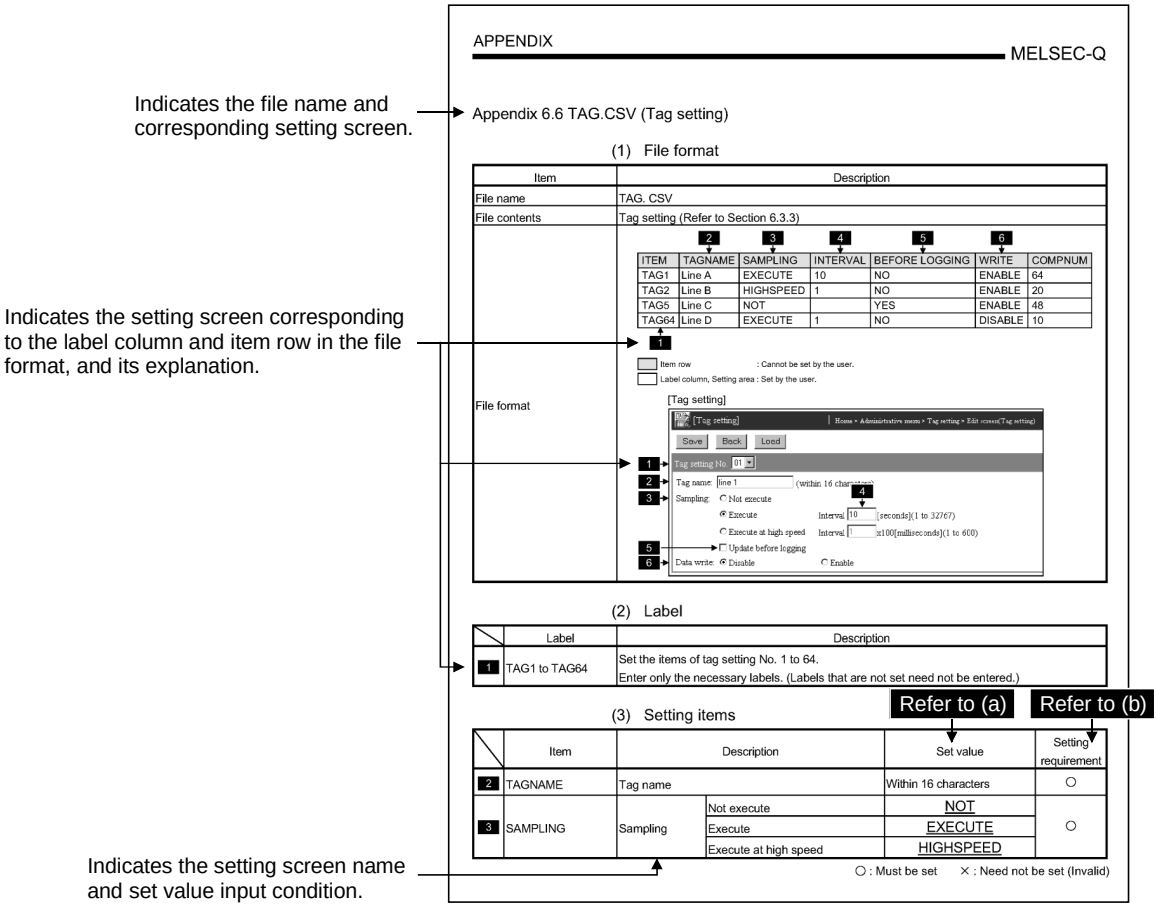
(3) How to use the setting information file formats

The following describes how to use the setting information file formats given in this section and later.



(a) "Set value"

1) Underlined set value ((Example) YES)

Enter alphabetic characters in uppercase.

2) (Blank)

A set value need not be entered.

3) Setting other than above 1) and 2)

Enter any value according to the setting range in the Set value field.

(b) "Setting requirement"

○ : This item must be set. Always enter a value.

× : This item need not be set (invalid). It is not necessary to enter a value.

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Appendix 6.3 SYSTEM.CSV (System setting)

(1) File format

Item	Description
File name	SYSTEM. CSV
File contents	System setting (Refer to Section 4.6.3)
File format	1 NWTYPE LAN 2 IPTYPE AUTO 3 IPADDRESS 4 SUBNET 5 GATEWAY 6 DNSTYPE AUTO 7 DNS1 8 DNS2 9 HTTPTYPE DEFAULT 10 HTTPPORT 11 HTTPNAT YES 12 FTPTYPE DEFAULT 13 FTPPORT 14 FTPNAT YES 15 SYSTEMNAME QJ71WS96 16 DIAGNOSIS NO 17 INTERVAL 18 DESTINATION 19 EDEVICE 20 STARTUP YES Label column : Cannot be set by the user. Setting area : Set by the user.

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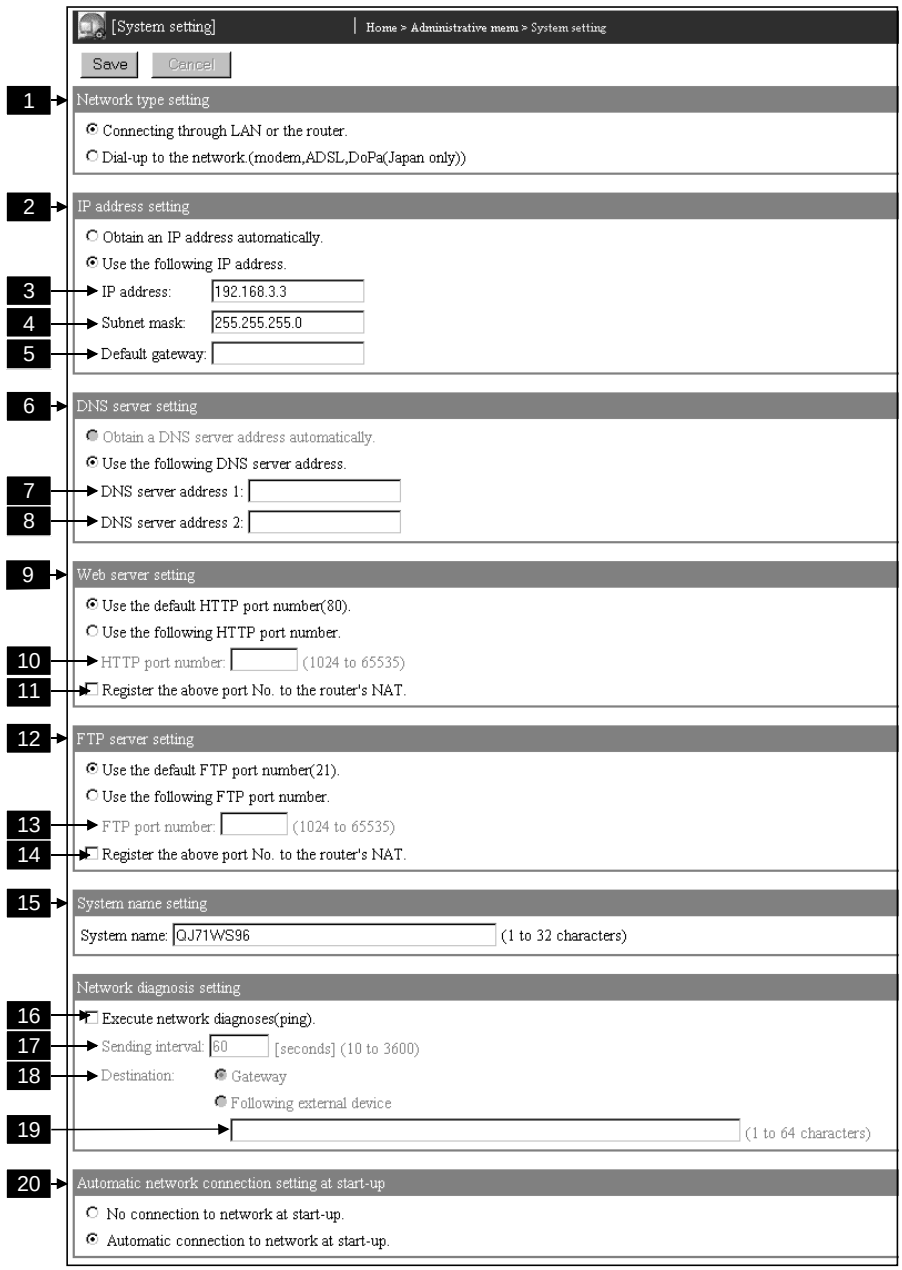
Item	Description
File format (Continued)	[System setting] 

(2) Label

	Label	Description		Set value	Setting requirement
1	NWTYPE	Network type setting	Connecting through LAN or the router.	LAN	○
			Dial-up to the network.(modem, ADSL)	DIALUP	
2	IPTYPE	IP address setting	Obtain an IP address automatically.	AUTO	○
			Use the following IP address.	SPECIFY	

○ : Must be set　　× : Need not be set (Invalid)

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	Label	Description		Set value	Setting requirement
3	IPADDRESS	IP address	When "AUTO" is selected at IPTYPE	(Blank)	×
			When "SPECIFY" is selected at IPTYPE	IP address (decimal)	○
4	SUBNET	Subnet mask	When "AUTO" is selected at IPTYPE	(Blank)	×
			When "SPECIFY" is selected at IPTYPE	Subnet mask (decimal)	○
5	GATEWAY	Default gateway	When "AUTO" is selected at IPTYPE	(Blank)	×
			When "SPECIFY" is selected at IPTYPE and "GATEWAY" is selected at DESTINATION	Default gateway (decimal)	○
			When other than the above is selected	Default gateway (decimal) or (blank)	○
6	DNSTYPE	DNS server setting	Obtain a DNS server address automatically.	AUTO	○
			Use the following DNS server address.	SPECIFY	
7	DNS1	DNS server address 1	When "AUTO" is selected at DNSTYPE	(Blank)	×
			When "SPECIFY" is selected at DNSTYPE	DNS server address 1 (decimal) or (blank)	○
8	DNS2	DNS server address 2	When "AUTO" is selected at DNSTYPE	(Blank)	×
			When "SPECIFY" is selected at DNSTYPE	DNS server address 2 (decimal) or (blank)	○
9	HTTPTYPE	Web server setting	Use the default HTTP port number (80).	DEFAULT	○
			Use the following HTTP port number.	SPECIFY	
10	HTTPPORT	HTTP port number	When "DEFAULT" is selected at HTTPTYPE	(Blank)	×
			When "SPECIFY" is selected at HTTPTYPE	1024 to 65535	○
11	HTTPNAT	Register the above port No. to the router's NAT.	Mark	YES	○
			Do not mark	NO	
12	FTPTYPE	FTP server setting	Use the default FTP port number (21).	DEFAULT	○
			Use the following FTP port number.	SPECIFY	

○ : Must be set × : Need not be set (Invalid)

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	Label	Description		Set value	Setting requirement
13	FTPPORT	FTP port number	When " DEFAULT " is selected at FTPTYPE	(Blank)	×
			When "SPECIFY" is selected at FTPTYPE	1024 to 65535	○
14	FTPNAT	Register the above port No. to the router's NAT.	Mark	YES	○
			Do not mark	NO	
15	SYSTEMNAME	System name setting	System name	Within 32 characters	○
16	DIAGNOSIS	Execute network diagnoses (ping).	Mark	YES	○
			Do not mark	NO	
17	INTERVAL	Sending interval	When "YES" is selected at DIAGNOSIS	10 to 3600 (unit : seconds)	○
			When "NO" is selected at DIAGNOSIS	(Blank)	×
18	DESTINATION	Destination	When "YES" is selected at DIAGNOSIS: Gateway	Gateway	○
			When "YES" is selected at DIAGNOSIS: Following external device	Following	
			When "NO" is selected at DIAGNOSIS	(Blank)	×
19	EDEVICE	Following external device	When "YES" is selected at DIAGNOSIS and "FOLLOWING" is selected at DESTINATION	1 to 64 characters	○
			When other than the above is selected	(Blank)	×
20	STARTUP	Automatic network connection setting at start-up	No connection to network at start-up.	NO	○
			Automatic connection to network at start-up.	YES	

○ : Must be set × : Need not be set (Invalid)

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Appendix 6.4 DIALUP.CSV (Dial-up setting)

(1) File format

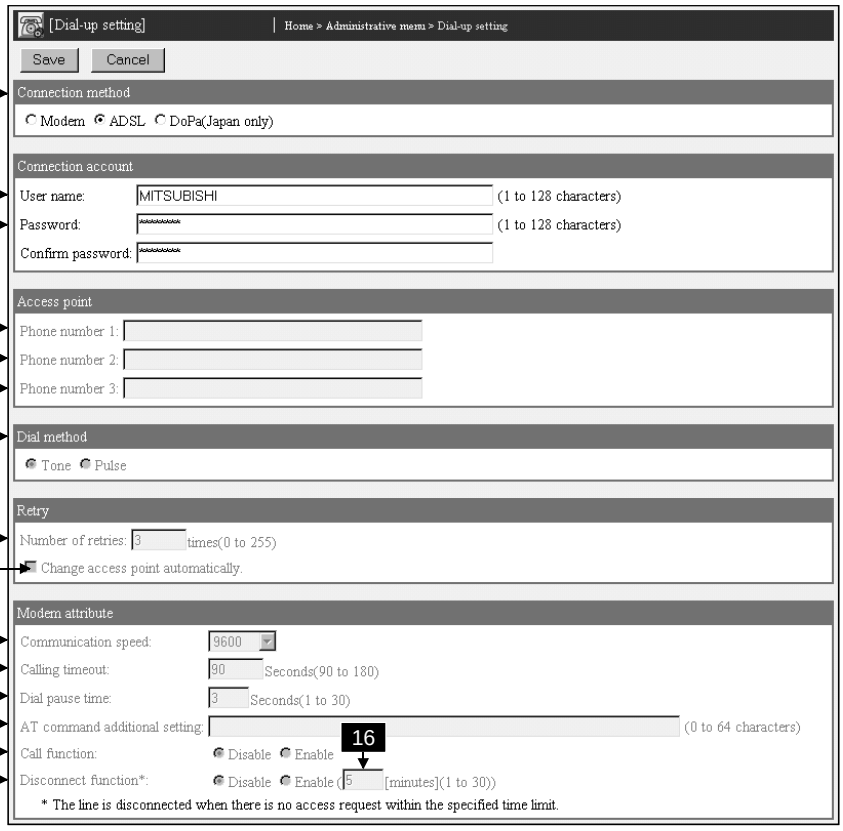
Item	Description
File name	DIALUP. CSV
File contents	Dial-up setting (Refer to Section 4.6.4)
File format	

1	CMETHOD	MODEM
2	USERNAME	USERNAME
3	PASSWORD	PASSWORD
4	NUMBER1	012-3456-7890
5	NUMBER2	012-3456-7891
6	NUMBER3	
7	DMETHOD	TONE
8	RETRY	3
9	CHANGEPOINT	YES
10	SPEED	9600
11	TIMEOUT	90
12	PAUSE	3
13	ATCOMMAND	
14	CALL	NO
15	DISCONNECT	NO
16	DTIME	

Label column : Cannot be set by the user.

Setting area : Set by the user.

[Dial-up setting]



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(2) Label

	Label	Description		Set value	Setting requirement
1	CMETHOD	Connection method	Modem	MODEM	○
			ADSL	ADSL	
			Dopa (Japan only)	DOPA	
2	USERNAME	User name ＊1		1 to 128 characters or (Blank)	○
3	PASSWORD	Password ＊1		1 to 128 characters or (Blank)	○
4	NUMBER1	Phone number 1 ＊1＊2	When "MODEM" or "DOPA" is selected at CMETHOD	1 to 20 (Applicable characters: 0 to 9, P, p, #, *, -)	○
			When "ADSL" is selected at CMETHOD	(Blank)	×
5	NUMBER2	Phone number 2	When "YES" is selected at CHANGEPOINT	1 to 20 (Applicable characters: 0 to 9, P, p, #, *, -)	○
			When "NO" is selected at CHANGEPOINT	(Blank)	×
6	NUMBER3	Phone number 3	When "YES" is selected at CHANGEPOINT	1 to 20 (Applicable characters: 0 to 9, P, p, #, *, -)	○
			When "NO" is selected at CHANGEPOINT	(Blank)	×
7	DMETHOD	Dial method	When "MODEM" is selected at CMETHOD, Tone	TONE	○
			When "MODEM" is selected at CMETHOD, Pulse	PULSE	
			When other than the above is selected at CMETHOD	(Blank)	×
8	RETRY	Number of retries	When "MODEM" or "DOPA" is selected at CMETHOD	0 to 255 (unit : times)	○
			When "ADSL" is selected at CMETHOD	(Blank)	×
9	CHANGEPOINT	Change access point automatically.	When "MODEM" or "DOPA" is selected at CMETHOD, Mark	YES	○
			When "MODEM" or "DOPA" is selected at CMETHOD, Do not mark	NO	
			When "ADSL" is selected at CMETHOD	(Blank)	×

○ : Must be set × : Need not be set (Invalid)

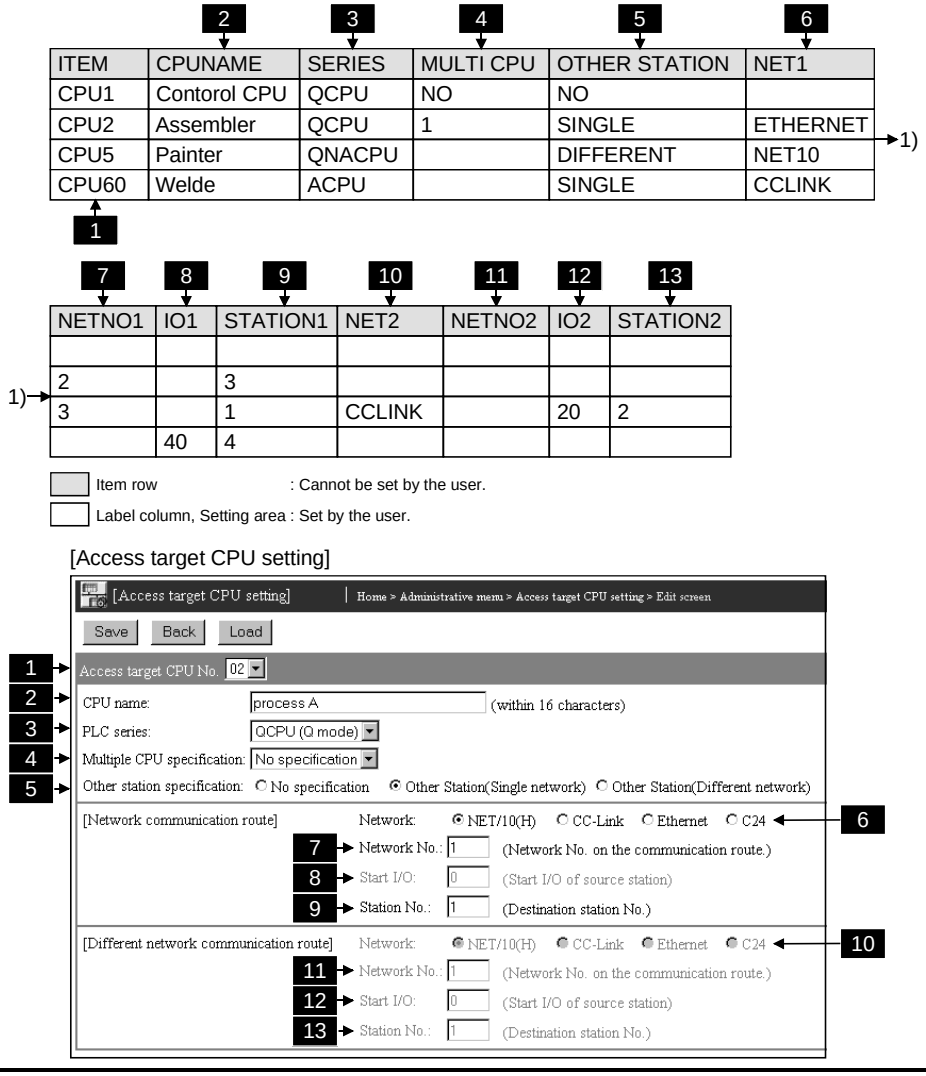
	Label	Description		Set value	Setting requirement
10	SPEED	Communication speed	When "MODEM" or "DOPA" is selected at CMETHOD	9600, 19200, 38400, 57600, 115200	○
			When "ADSL" is selected at CMETHOD	(Blank)	×
11	TIMEOUT	Calling timeout	When "MODEM" or "DOPA" is selected at CMETHOD	90 to 180 (unit : seconds)	○
			When "ADSL" is selected at CMETHOD	(Blank)	×
12	PAUSE	Dial pause time	When "MODEM" is selected at CMETHOD	1 to 30 (unit : seconds)	○
			When other than the above is selected at CMETHOD	(Blank)	×
13	ATCOMMAND	AT command additional setting	When "MODEM" or "DOPA" is selected at CMETHOD	Additional AT command (1 to 64 characters) or (blank)	○
			When "ADSL" is selected at CMETHOD	(Blank)	×
14	CALL	Call function	When "MODEM" is selected at CMETHOD, Disable	NO	○
			When "MODEM" is selected at CMETHOD, Enable	YES	
			When other than the above is selected at CMETHOD	(Blank)	×
15	DISCONNECT	Disconnect function	When "MODEM" is selected at CMETHOD, Disable	NO	○
			When "MODEM" is selected at CMETHOD, Enable	YES	
			When other than the above is selected at CMETHOD	(Blank)	×
16	DTIME	Disconnect time	When " MODEM " is selected at CMETHOD and "YES" is selected at DISCONNECT	1 to 30 (unit: minutes)	○
			When other than the above is selected	(Blank)	×

○ : Must be set × : Need not be set (Invalid)

*1 USERNAME, PASSWORD and NUMBER1 can all be blanked.
However, if any one of the three has been set, the other two must also be set. (They cannot be blanked.)

Appendix 6.5 CPU.CSV (Access target CPU setting)

(1) File format

Item	Description
File name	CPU. CSV
File contents	Access target CPU setting (Refer to Section 4.6.7)
File format	

2
3
4
5
6
ITEM | CPUNAME | SERIES | MULTI CPU | OTHER STATION | NET1
CPU1 | Contorol CPU | QCPU | NO | NO |
CPU2 | Assembler | QCPU | 1 | SINGLE | ETHERNET
CPU5 | Painter | QNACPU | | DIFFERENT | NET10
CPU60 | Welde | ACPU | | SINGLE | CCLINK
1)
1
7
8
9
10
11
12
13
NETNO1 | IO1 | STATION1 | NET2 | NETNO2 | IO2 | STATION2
2 | | 3 | | | |
3 | | 1 | CCLINK | | 20 | 2
| 40 | 4 | | | |
1)
Item row : Cannot be set by the user.
Label column, Setting area : Set by the user.
[Access target CPU setting]
[Access target CPU setting]
Home > Administrative menu > Access target CPU setting > Edit screen
Save
Back
Load
Access target CPU No. 02
CPU name: process A (within 16 characters)
PLC series: QCPU (Q mode)
Multiple CPU specification: No specification
Other station specification: No specification Other Station(Single network) Other Station(Different network)
[Network communication route]
Network: NET/10(H) CC-Link Ethernet C24
Network No.: 1 (Network No. on the communication route.)
Start I/O: 0 (Start I/O of source station)
Station No.: 1 (Destination station No.)
[Different network communication route]
Network: NET/10(H) CC-Link Ethernet C24
Network No.: 1 (Network No. on the communication route.)
Start I/O: 0 (Start I/O of source station)
Station No.: 1 (Destination station No.)
1
2
3
4
5
6
7
8
9
10
11
12
13

(2) Label

	Label	Description
1	CPU1	Set the items of access target CPU setting No. 1. (Must be set) Only "CPUNAME" can be set. (The settings of the other setting items are invalid.)
	CPU2 to CPU64	Set the items of access target CPU setting No. 2 to 64. Enter only the necessary labels. (Labels that are not set need not be entered.)

(3) Setting items

	Item	Description			Set value	Setting requirement
2	CPUNAME	CPU name			Within 16 characters	○
3	SERIES	PLC series	QCPU (Q mode)		QCPU	○
			QCPU (A mode)		QCPUA	
			QnACPU		QNACPU	
			ACPU		ACPU	
4	MULTI CPU	Multiple CPU specification	When "QCPU" is selected at SERIES	No specification	NO	○
				CPU No.1	1	
				CPU No.2	2	
				CPU No.3	3	
				CPU No.4	4	
			When other than the above is selected at SERIES		(Blank)	×
5	OTHER STATION	Other station specification	No specification ＊1		NO	○
			Other station (Single network)		SINGLE	
			Other station (Different network)		DIFFERENT	
6	NET1	Network	When "SINGLE" or "DIFFERENT" is selected at OTHER STAION ＊2＊3	NET/10(H)	NET10	○
				CC-Link	CCLINK	
				Ethernet	ETHERNET	
				C24	C24	
			When "NO" is selected at OTHER STATION		(Blank)	×
7	NETNO1	Network No.	When "SINGLE" or "DIFFERENT" is selected at OTHER STATION and "NET10" or "ETHERNET" is selected at NET1		1 to 239	○
			When other than the above is selected		(Blank)	×
8	IO1	Start I/O	When "SINGLE" or "DIFFERENT" is selected at OTHER STATION and "CCLINK" or "C24" is selected at NET1		0_H to $FE0_H$ (hexadecimal)	○
			When other than the above is selected		(Blank)	×

○ : Must be set × : Need not be set (Invalid)

	Item	Description			Set value	Setting requirement
9	STATION1	Station No.	When "SINGLE" or "DIFFERENT" is selected at OTHER STAION	When "NET10" or "ETHERNET" is selected at NET1	1 to 64	○
				When "CCLINK" is selected at NET1	0 to 63	
				When "C24" is selected at NET1	0 to 31	
			When "NO" is selected at OTHER STAION		(Blank)	×
10	NET2	Network	When "DIFFERENT" is selected at OTHER STAION ∗4∗5∗6	NET/10(H)	NET10	○
				CC-Link	CCLINK	
				Ethernet	ETHERNET	
				C24	C24	
			When other than the above is selected at OTHER STAION S		(Blank)	×
11	NETNO2	Network No.	When "DIFFERENT" is selected at OTHER STATION and "NET10" or "ETHERNET" is selected at NET2		1 to 239	○
			When other than the above is selected		(Blank)	×
12	IO2	Start I/O	When "DIFFERENT" is selected at OTHER STATION and "CCLINK" or "C24" is selected at NET2		0_H to $FE0_H$ (hexadecimal)	○
			When other than the above is selected		(Blank)	×
13	STATION2	Station No.	When "DIFFERENT" is selected at OTHER STATION	When "NET10" or "ETHERNET" is selected at NET2	1 to 64	○
				When "CCLINK" is selected at NET2	0 to 63	
				When "C24" is selected at NET2	0 to 31	
			When other than the above is selected at OTHER STATION		(Blank)	×

○ : Must be set × : Need not be set (Invalid)

*1 When other than "QCPU" is selected at SERIES, "NO" cannot be set.
To do so will result in an error.

*2 When "QNACPU" is selected at SERIES and "DIFFERENT" is selected at OTHER STATION, "CCLINK" and "C24" cannot be set. To do so will result in an error.

*3 When "QCPUA" or "ACPU" is selected at SERIES

1) When "SINGLE" is selected at OTHER STATION
"ETHERNET" and "C24" cannot be set. To do so will result in an error.

2) When "DIFFERENT" is selected at OTHER STATION
"CCLINK" and "C24" cannot be set. To do so will result in an error.

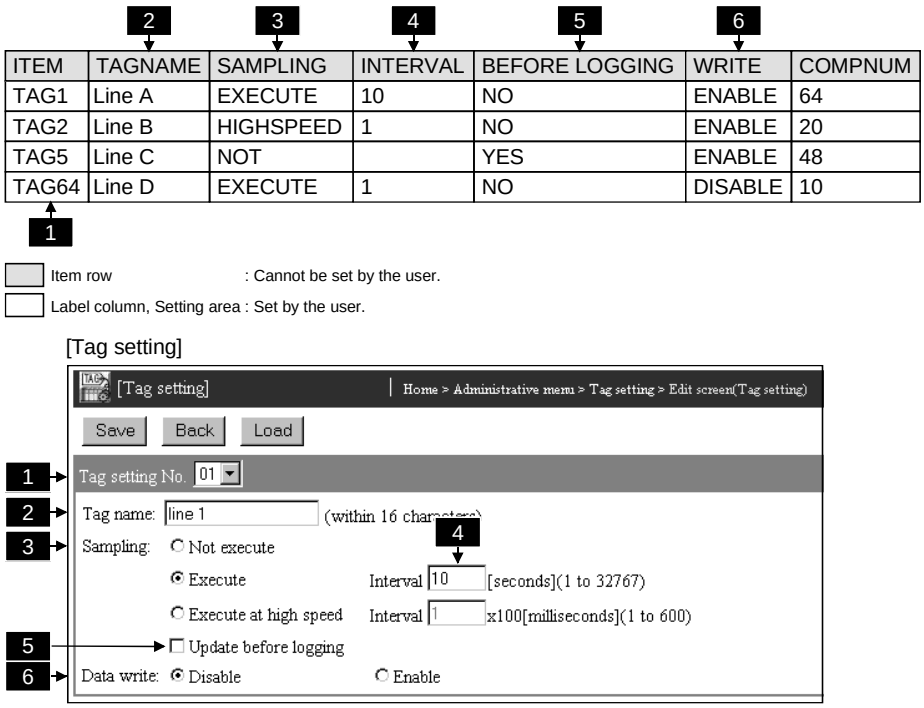
*4 When "NET10" or "ETHERNET" is selected at NET1, "NET10" and "ETHERNET" cannot be set. To do so will result in an error.

*5 When "CCLINK" or "C24" is selected at NET1, "CCLINK" and "C24" cannot be set. To do so will result in an error.

*6 When other than "QCPU" is selected at SERIES, "NET10", "ETHERNET" and "C24" cannot be set. To do so will result in an error.

Appendix 6.6 TAG.CSV (Tag setting)

(1) File format

Item	Description
File name	TAG. CSV
File contents	Tag setting (Refer to Section 6.3.3)
File format	

2
3
4
5
6
ITEM | TAGNAME | SAMPLING | INTERVAL | BEFORE LOGGING | WRITE | COMPNUM
TAG1 | Line A | EXECUTE | 10 | NO | ENABLE | 64
TAG2 | Line B | HIGHSPEED | 1 | NO | ENABLE | 20
TAG5 | Line C | NOT | | YES | ENABLE | 48
TAG64 | Line D | EXECUTE | 1 | NO | DISABLE | 10
1
Item row : Cannot be set by the user.
Label column, Setting area : Set by the user.
[Tag setting]
[Tag setting]
Home > Administrative menu > Tag setting > Edit screen(Tag setting)
Save
Back
Load
Tag setting No. 01
Tag name: line 1 (within 16 characters)
Sampling: Not execute
Execute Interval 10 [seconds](1 to 32767)
Execute at high speed Interval 1 x100[milliseconds](1 to 600)
Update before logging
Data write: Disable Enable

(2) Label

	Label	Description
1	TAG1 to TAG64	Set the items of tag setting No. 1 to 64. Enter only the necessary labels. (Labels that are not set need not be entered.)

(3) Setting items

	Item	Description		Set value	Setting requirement
2	TAGNAME	Tag name		Within 16 characters	○
3	SAMPLING	Sampling	Not execute	NOT	○
			Execute	EXECUTE	
			Execute at high speed	HIGHSPEED	

○ : Must be set × : Need not be set (Invalid)

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	Item	Description		Set value	Setting requirement
4	INTERVAL	Sampling Interval	When "NOT" is selected at SAMPLING	(Blank)	×
			When "EXECUTE" is selected at SAMPLING	1 to 32767 (unit : seconds)	○
			When "HIGHSPEED" is selected at SAMPLING	1 to 600 (unit: ×100ms)	
5	BEFORE LOGGING	Update before logging	Mark	YES	○
			Do not mark	NO	
6	WRITE	Data write	Disable	DISABLE	○
			Enable	ENABLE	
—	COMPNUM	Number of components		0 to 64	○

○ : Must be set × : Need not be set (Invalid)

*1 "Execute at high speed" can be registered to only one tag.
An error will result if multiple high speed sampling tags are set.

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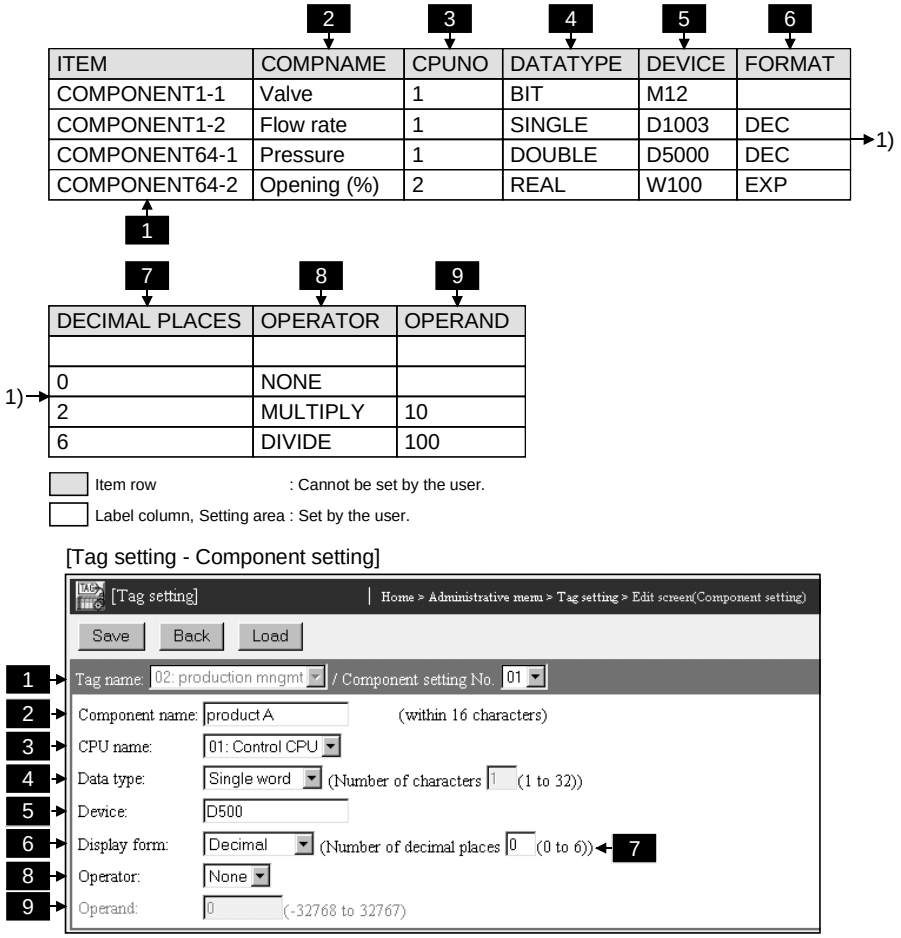
Appendix 6.7 COMPONENT.CSV (Tag setting - Component setting)

(1) File format

Item	Description
File name	COMPONENT. CSV
File contents	Tag setting - Component setting (Refer to Section 6.3.3)
File format	

(2) Label

	Label	Description
1	COMPONENT1-1 to COMPONENT64-64	• Set the items of component setting No. 1 to 64. COMPONENT64-64 Denotes component setting No. Denotes tag setting No. • The labels as many as the number set at "COMPNUM" of TAG.CSV must be set. The setting of more labels is ignored. (Example) When 10 is set at "COMPNUM" of label "TAG5" in TAG.CSV For COMPONENT.CSV, labels COMPONENT5-1 to COMPONENT5-10 must be set.

(3) Setting items

	Item	Description			Set value	Setting requirement
2	COMPNAME	Component name			Within 16 characters	○
3	CPUNO	CPU name (Access target CPU setting No.) ＊1			1 to 64 (fixed to 1 for high speed sampling tag)	○
4	DATATYPE	Data type	Single word		SINGLE	○
			Double word		DOUBLE	
			Real number		REAL	
			Bit		BIT	
			String (Numeral indicates the number of characters)		STRING1 to STRING32	
5	DEVICE	Device ＊2			Device	○
6	FORMAT	Display form	When "BIT" or "STRING" is selected at DATATYPE		(Blank)	×
			When other than the above is selected at DATATYPE	Decimal	DEC	○
				Exponential	EXP	
7	DECIMAL PLACES	Number of decimal places	When "BIT" or "STRING" is selected at DATATYPE		(Blank)	×
			When other than the above is selected at DATATYPE		0 to 6	○
8	OPERATOR	Operator	When "BIT" or "STRING" is selected at DATATYPE		(Blank)	×
			When other than the above is selected at DATATYPE	None	NONE	○
				+	PLUS	
				−	MINUS	
				×	MULTIPLY	
				/	DIVIDE	
9	OPERAND	Operand	When "BIT" or "STRING" is selected at DATATYPE		(Blank)	×
			When "NONE" is selected at OPERATOR		(Blank)	×
			When other than the above is selected		-32768 to 32767	○

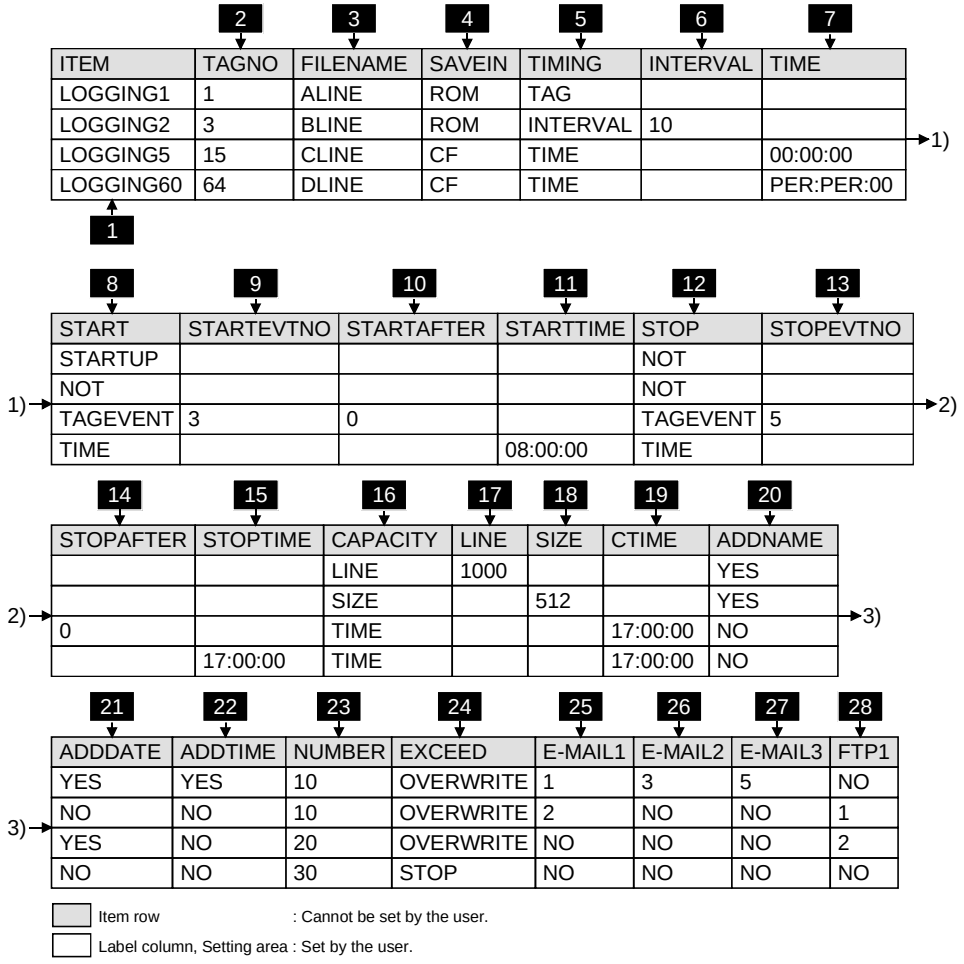
○ : Must be set × : Need not be set (Invalid)

＊1 Specify the access target CPU setting No. set to the label of CPU.CSV.
An error will occur if the specified access target CPU setting No. does not exist in CPU.CSV.

＊2 An error will occur if a non-existing device is set.
An error will occur if a device that does not match the data type is set.

Appendix 6.8 LOGGING.CSV (Logging setting)

(1) File format

Item	Description
File name	LOGGING. CSV
File contents	Logging setting (Refer to Section 6.4.4)
File format	

2 3 4 5 6 7
ITEM | TAGNO | FILENAME | SAVEIN | TIMING | INTERVAL | TIME
LOGGING1 | 1 | ALINE | ROM | TAG | |
LOGGING2 | 3 | BLINE | ROM | INTERVAL | 10 |
LOGGING5 | 15 | CLINE | CF | TIME | | 00:00:00
LOGGING60 | 64 | DLINE | CF | TIME | | PER:PER:00
1)
1
8 9 10 11 12 13
START | STARTEVTNO | STARTAFTER | STARTTIME | STOP | STOPEVTNO
STARTUP | | | | NOT |
1) NOT | | | | NOT |
TAGEVENT | 3 | 0 | | TAGEVENT | 5
TIME | | | 08:00:00 | TIME |
2)
14 15 16 17 18 19 20
STOPAFTER | STOPTIME | CAPACITY | LINE | SIZE | CTIME | ADDNAME
| | LINE | 1000 | | | YES
| | SIZE | | 512 | | YES
2) 0 | | TIME | | | 17:00:00 | NO
3)
| 17:00:00 | TIME | | | 17:00:00 | NO
21 22 23 24 25 26 27 28
ADDDATE | ADDTIME | NUMBER | EXCEED | E-MAIL1 | E-MAIL2 | E-MAIL3 | FTP1
YES | YES | 10 | OVERWRITE | 1 | 3 | 5 | NO
NO | NO | 10 | OVERWRITE | 2 | NO | NO | 1
3) YES | NO | 20 | OVERWRITE | NO | NO | NO | 2
NO | NO | 30 | STOP | NO | NO | NO | NO
Item row : Cannot be set by the user.
Label column, Setting area : Set by the user.

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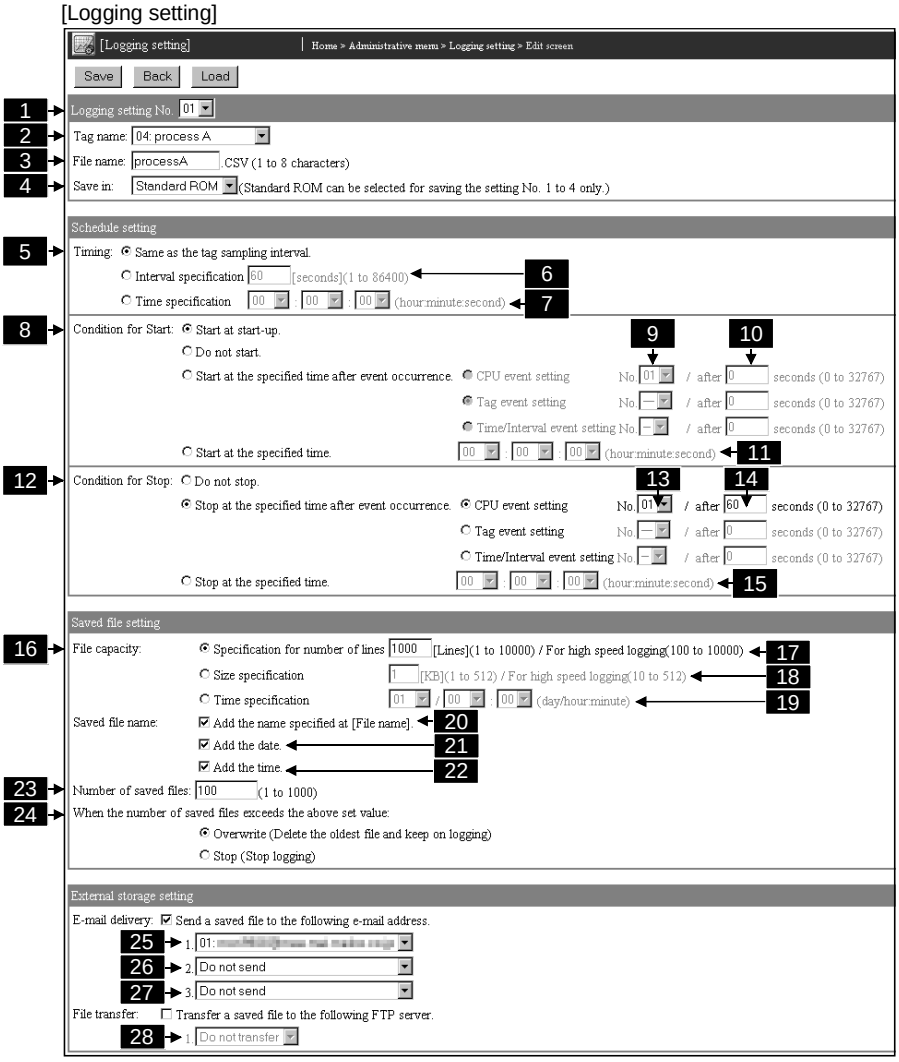
Item	Description
File format (Continued)	[Logging setting] 

(2) Label

	Label	Description
1	LOGGING1 to LOGGING64	Set the items of logging setting No. 1 to 64. Enter only the necessary labels. (Labels that are not set need not be entered.)

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(3) Setting items

	Item	Description		Set value	Setting requirement
2	TAGNO	Tag name (tag setting No.) ∗1∗2		1 to 64	○
3	FILENAME	File name ∗3∗4		1 to 8 characters	○
4	SAVEIN	Save in ∗5	Standard ROM	ROM	○
			Compact Flash card	CF	
		Fixed to "Compact Flash card" when the label is any of LOGGING5 to LOGGING64 or high speed logging has been set.		CF	×
5	TIMING	Timing	Same as the tag sampling interval	TAG	○
			Interval specification	INTERVAL	
			Time specification	TIME	
		Fixed to "Same as the tag sampling interval" when high speed logging has been set.		TAG	×
6	INTERVAL	Interval	When "INTERVAL" is selected at TIMING	1 to 86400 (unit : seconds)	○
			When other than the above is selected at TIMING	(Blank)	×
7	TIME	Time	When "TIME" is selected at TIMING	• Hour:Minute:Second format Hour : 00 to 23, PER Minute : 00 to 59, PER (PER can be specified for Minute only when PER is specified for Hour) Second : 00 to 59 (Example) 9:00:00, 17:00:00, PER:PER:00	○
			When other than the above is selected at TIMING	(Blank)	×
8	START	Condition for Start	Start at start-up	STARTUP	○
			Do not start	NOT	
			After CPU event occurrence	CPUEVENT	
			After tag event occurrence	TAGEVENT	
			After time event occurrence	TIMEEVENT	
			Start at the specified time	TIME	

○ : Must be set × : Need not be set (Invalid)

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	Item	Description		Set value	Setting requirement
9	STARTEVTNO	Event setting No. ＊6	When "CPUEVENT" is selected at START	1 to 64	○
			When "TAGEVENT" is selected at START	1 to 256	
			When "TIMEEVENT" is selected at START	1 to 16	
			When other than the above is selected at START	(Blank)	×
10	STARTAFTER	The specified time after event occurrence	When "CPUEVENT" is selected at START	1 to 32767 (unit : seconds)	○
			When "TAGEVENT" is selected at START		
			When "TIMEEVENT" is selected at START		
			When other than the above is selected at START	(Blank)	×
11	STARTTIME	Specified time	When "TIME" is selected at START	• Hour:Minute:Second format Hour : 00 to 23, PER Minute : 00 to 59, PER (PER can be specified for Minute only when PER is specified for Hour) Second : 00 to 59 (Example) 9:00:00, 17:00:00, PER:PER:00	○
			When other than the above is selected at START	(Blank)	×
12	STOP	Condition for Stop	Do not stop	NOT	○
			After CPU event occurrence	CPUEVENT	
			After tag event occurrence	TAGEVENT	
			After time event occurrence	TIMEEVENT	
			Stop at the specified time	TIME	
13	STOPEVTNO	Event setting No. ＊6	When "CPUEVENT" is selected at STOP	1 to 64	○
			When "TAGEVENT" is selected at STOP	1 to 256	
			When "TIMEEVENT" is selected at STOP	1 to 16	
			When other than the above is selected at STOP	(Blank)	×

○ : Must be set × : Need not be set (Invalid)

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	Item	Description		Set value	Setting requirement
14	STOPAFTER	The specified time after event occurrence	When "CPUEVENT" is selected at STOP	0 to 32767 (unit : seconds)	○
			When "TAGEVENT" is selected at STOP		
			When "TIMEEVENT" is selected at STOP		
			When other than the above is selected at STOP	(Blank)	×
15	STOPTIME	Specified time	When "TIME" is selected at STOP	• Hour:Minute:Second format Hour : 00 to 23, PER Minute : 00 to 59, PER (PER can be specified for Minute only when PER is specified for Hour) Second : 00 to 59 (Example) 9:00:00, 17:00:00, PER:PER:00	○
			When other than the above is selected at STOP	(Blank)	×
16	CAPACITY	File capacity	Specification for number of lines	LINE	○
			Size specification	SIZE	
			Time specification	TIME	
17	LINE	Line	When "LINE" is selected at CAPACITY	1 to 10000 ＊7 (unit: line)	○
			When other than the above is selected at CAPACITY	(Blank)	×
18	SIZE	Size	When "SIZE" is selected at CAPACITY	1 to 512 ＊8 (unit: k byte)	○
			When other than the above is selected at CAPACITY	(Blank)	×
19	CTIME	Time	When "TIME" is selected at CAPACITY	• Hour:Minute:Second format Hour : 00 to 23, PER Minute : 00 to 59, PER (PER can be specified for Minute only when PER is specified for Hour) Second : 00 to 59 (Example) 9:00:00, 17:00:00, PER:PER:00	○
			When other than the above is selected at CAPACITY	(Blank)	×

○ : Must be set × : Need not be set (Invalid)

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	Item	Description		Set value	Setting requirement
20	ADDNAME	Saved files names : Add the name	Mark	YES	○
			Do not mark	NO	
21	ADDDATE	Saved files names : Add the date	Mark	YES	○
			Do not mark	NO	
22	ADDTIME	Saved files names : Add the time	Mark	YES	○
			Do not mark	NO	
23	NUMBER	Number of saved files		1 to 1000	○
24	EXCEED	When the number of saved files exceeds the above set value	Overwrite	OVERWRITE	○
			Stop	STOP	
25	E-MAIL1	E-mail address1 ＊9	Do not send	NO	○
			Send to the specified e-mail address	1 to 16	
26	E-MAIL2	E-mail address2 ＊9	Do not send	NO	○
			Send to the specified e-mail address	1 to 16	
27	E-MAIL3	E-mail address3 ＊9	Do not send	NO	○
			Send to the specified e-mail address	1 to 16	
28	FTP1	FTP server1 ＊9	Do not transfer	NO	○
			Transfer to the specified address	1 to 16	

○ : Must be set　　× : Need not be set (Invalid)

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*1 Specify the tag setting No. set to the label of TAG.CSV.
An error will occur if the specified tag setting No. does not exist in TAG.CSV.

*2 High speed logging is performed when "Execute at high speed" is selected for the specified tag setting No.
Only one high speed logging can be registered.
An error will occur if multiple high speed loggings are set.

*3 An 8-digit hexadecimal numeral cannot be set. (Example) AAAABBBB

*4 Multiple files of the same name cannot be specified.
An error will occur if files of the same name exist.

*5 ROM can be selected at only "SAVEIN" of LOGGING1 to LOGGING4.

*6 Specify the event setting No. set to the label of CPUEVT.CSV, TAGEVT.CSV, or TIMEEVT.CSV.
An error will occur if the specified event setting No. does not exist in CPUEVT.CSV, TAGEVT.CSV, or TIMEEVT.CSV.

*7 When high speed logging has been set, the setting range is 100 to 1000.

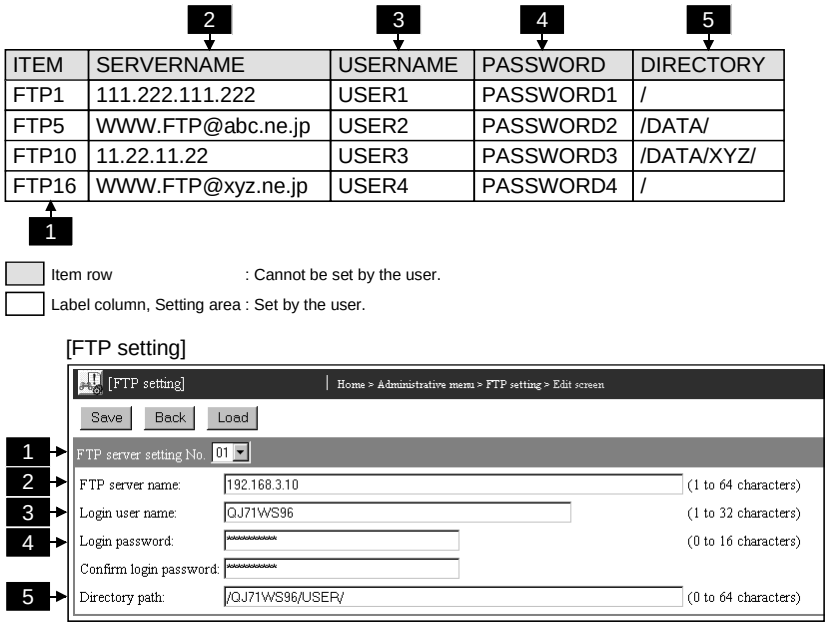
*8 When high speed logging has been set, the setting range is 10 to 512.

*9 Specify the e-mail address (To:) setting No. set to the label of EMAIL.CSV.
An error will occur if the specified e-mail address (To:) setting No. does not exist in EMAIL.CSV.

*10 Specify the FTP server setting No. set to the label of FTP.CSV.
An error will occur if the specified FTP server setting No. does not exist in FTP.CSV.

Appendix 6.9 FTP.CSV (FTP setting)

(1) File format

Item	Description
File name	FTP. CSV
File contents	FTP setting (Refer to Section 6.7.3)
File format	

2
3
4
5
ITEM | SERVERNAME | USERNAME | PASSWORD | DIRECTORY
FTP1 | 111.222.111.222 | USER1 | PASSWORD1 | /
FTP5 | WWW.FTP@abc.ne.jp | USER2 | PASSWORD2 | /DATA/
FTP10 | 11.22.11.22 | USER3 | PASSWORD3 | /DATA/XYZ/
FTP16 | WWW.FTP@xyz.ne.jp | USER4 | PASSWORD4 | /
1
Item row : Cannot be set by the user.
Label column, Setting area : Set by the user.
[FTP setting]
[FTP setting]
Home > Administrative menu > FTP setting > Edit screen
Save
Back
Load
FTP server setting No. 01
FTP server name: 192.168.3.10 (1 to 64 characters)
Login user name: QJ71WS96 (1 to 32 characters)
Login password: (0 to 16 characters)
Confirm login password:
Directory path: /QJ71WS96/USER/ (0 to 64 characters)
1
2
3
4
5

(2) Label

	Label	Description
1	FTP1 to FTP16	Set the items of FTP server setting No. 1 to 16. Enter only the necessary labels. (Labels that are not set need not be entered.)

(3) Setting items

	Item	Description	Set value	Setting requirement
2	SERVERNAME	Target FTP server name	1 to 64 characters	○
3	USERNAME	Login user name	1 to 32 characters	○
4	PASSWORD	Login password	0 to 16 characters or (Blank)	○
5	DIRECTORY	Directory path	0 to 64 characters or (Blank)	○

○ : Must be set × : Need not be set (Invalid)

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Appendix 6.10 EMAIL.CSV (E-mail setting)

(1) File format

Item	Description
File name	EMAIL. CSV
File contents	E-mail setting (Refer to Section 6.6.3)
File format	

1	SMTPSERVER	abc.ne.jp
2	FROM	webserver@abc.ne.jp
3	USERNAME	
4	PASSWORD	
5	TO1	address1@abc.ne.jp
6	TO2	address2@abc.ne.jp
7	TO3	
8	TO4	
9	TO5	address5@abc.ne.jp
10	TO6	address6@abc.ne.jp
11	TO7	address7@abc.ne.jp
12	TO8	
13	TO9	
14	TO10	
15	TO11	
16	TO12	
17	TO13	
18	TO14	
19	TO15	
20	TO16	
21	POPBEFORESMTP	YES
22	POPSERVER	abc.ne.jp

Label column : Cannot be set by the user.
Setting area : Set by the user.

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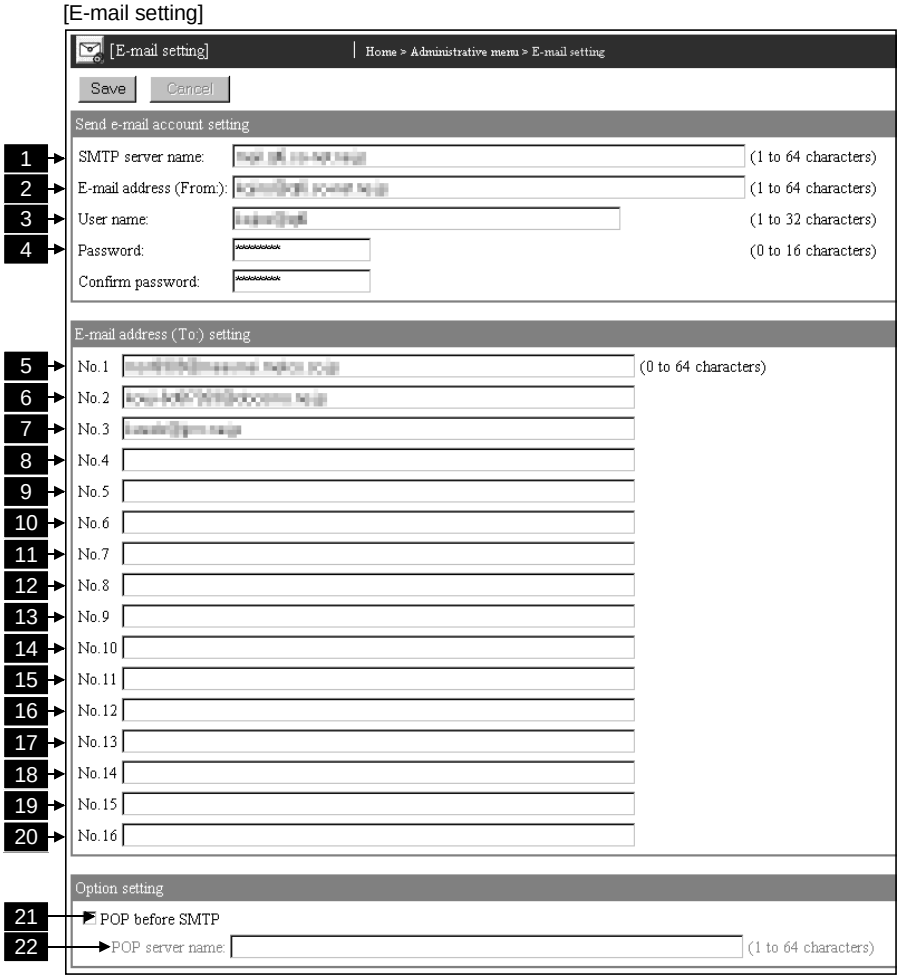
Item	Description
File format (Continued)	[E-mail setting] 

(2) Label

	Label	Description		Set value	Setting requirement
1	SMTPSERVER	SMTP server name		1 to 64 characters	○
2	FROM	E-mail address (From:)		1 to 64 characters	○
3	USERNAME	User name		1 to 32 characters	○
4	PASSWORD	Password		0 to 16 characters or (Blank)	○
5 to 20	T01 to T016	E-mail address (To:) setting No. 1 to 16		0 to 64 characters or (Blank)	○
21	POPBEFORESMTP	POP before SMTP	Mark	YES	○
			Do not mark	NO	
22	POPSERVER	POP server name	When "YES" is selected at POPBEFORESMT	1 to 64 characters	○
			When "NO" is selected at POPBEFORESMT	(Blank)	×

○ : Must be set × : Need not be set (Invalid)

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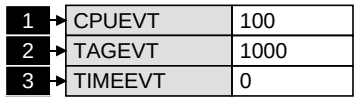
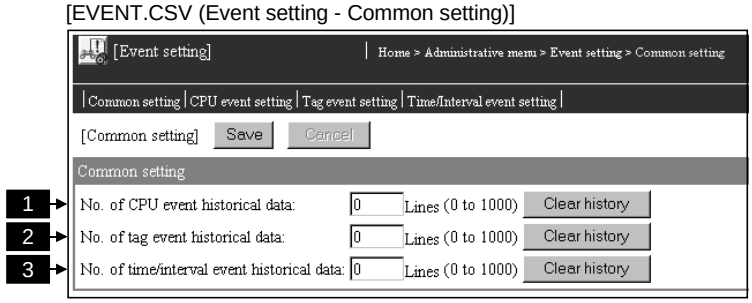
Appendix 6.11 EVENT.CSV (Event setting - Common setting)

(1) File format

Item	Description
File name	EVENT.CSV
File contents	Event setting - Common setting (Refer to Section 6.5.3)
File format	 Label column : Cannot be set by the user. Setting area : Set by the user. [EVENT.CSV (Event setting - Common setting)] 

(2) Label

	Label	Description	Set value	Setting requirement
1	CPUEVT	No. of CPU event historical data	0 to 1000 (unit: lines)	○
2	TAGEVT	No. of tag event historical data	0 to 1000 (unit: lines)	○
3	TIMEEVT	No. of time/interval event historical data	0 to 1000 (unit: lines)	○

○ : Must be set × : Need not be set (Invalid)

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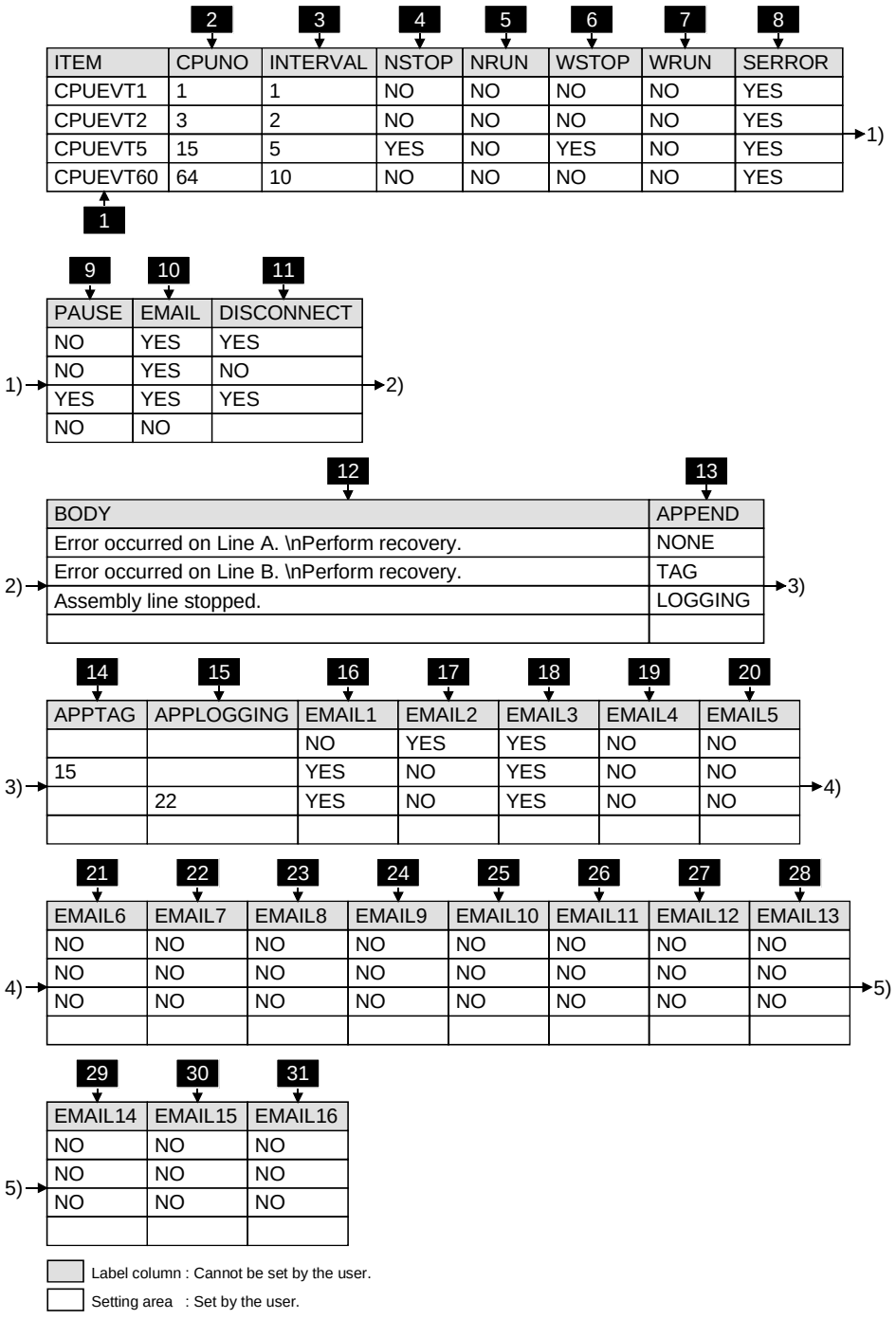
Appendix 6.12 CPUEVT.CSV (Event setting - CPU event setting)

(1) File format

Item	Description
File name	CPUEVT.CSV
File contents	Event setting - CPU event setting (Refer to Section 6.5.3)
File format	

2 3 4 5 6 7 8
ITEM | CPUNO | INTERVAL | NSTOP | NRUN | WSTOP | WRUN | SERROR
CPUEVT1 | 1 | 1 | NO | NO | NO | NO | YES
CPUEVT2 | 3 | 2 | NO | NO | NO | NO | YES
CPUEVT5 | 15 | 5 | YES | NO | YES | NO | YES
CPUEVT60 | 64 | 10 | NO | NO | NO | NO | YES
1)
1
9 10 11
PAUSE | EMAIL | DISCONNECT
NO | YES | YES
NO | YES | NO
YES | YES | YES
NO | NO
1) 2)
12 13
BODY | APPEND
Error occurred on Line A. \nPerform recovery. | NONE
Error occurred on Line B. \nPerform recovery. | TAG
Assembly line stopped. | LOGGING
2) 3)
14 15 16 17 18 19 20
APPTAG | APPLOGGING | EMAIL1 | EMAIL2 | EMAIL3 | EMAIL4 | EMAIL5
NO | YES | YES | NO | NO
15 | YES | NO | YES | NO | NO
22 | YES | NO | YES | NO | NO
3) 4)
21 22 23 24 25 26 27 28
EMAIL6 | EMAIL7 | EMAIL8 | EMAIL9 | EMAIL10 | EMAIL11 | EMAIL12 | EMAIL13
NO | NO | NO | NO | NO | NO | NO | NO
NO | NO | NO | NO | NO | NO | NO | NO
NO | NO | NO | NO | NO | NO | NO | NO
4) 5)
29 30 31
EMAIL14 | EMAIL15 | EMAIL16
NO | NO | NO
NO | NO | NO
NO | NO | NO
5)
Label column : Cannot be set by the user.
Setting area : Set by the user.

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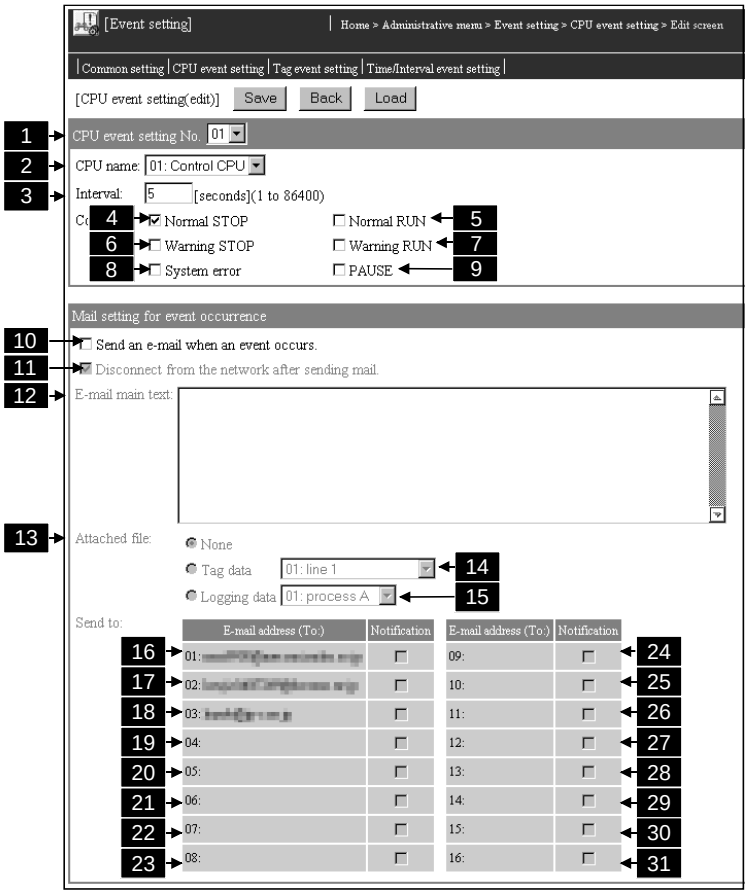
Item	Description
File format (Continued)	[Event setting - CPU event setting] 

(2) Label

	Label	Description
1	CPUEVT1 to CPUEVT64	Set the items of CPU event setting No. 1 to 64. Enter only the necessary labels. (Labels that are not set need not be entered.)

(3) Setting items

	Item	Description		Set value	Setting requirement
2	CPUNO	CPU name (Access target CPU setting No.) ＊1		1 to 64	○
3	INTERVAL	Interval		1 to 86400 (unit: seconds)	○
4	NSTOP	Normal STOP	Mark	YES	○
			Do not mark	NO	
5	NRUN	Normal RUN	Mark	YES	○
			Do not mark	NO	
6	WSTOP	Warning STOP	Mark	YES	○
			Do not mark	NO	

○ : Must be set　　× : Need not be set (Invalid)

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	Item	Description			Set value	Setting requirement
7	WRUN	Warning RUN	Mark		YES	○
			Do not mark		NO	
8	SERROR	System error	Mark		YES	○
			Do not mark		NO	
9	PAUSE	PAUSE	Mark		YES	○
			Do not mark		NO	
10	EMAIL	Send an e-mail when an event occurs.	Mark		YES	○
			Do not mark		NO	
11	DISCONNECT	Disconnect from the network after sending mail	When "YES" is selected at EMAIL	Mark	YES	○
				Do not mark	NO	
			When "NO" is selected at EMAIL		(Blank)	×
12	BODY	E-mail main text ＊2	When "YES" is selected at EMAIL		0 to 256 characters	○
			When "NO" is selected at EMAIL		(Blank)	×
13	APPEND	Attached file	When "YES" is selected at EMAIL	None	NONE	○
				Tag data	TAG	
				Logging Data	LOGGING	
			When "NO" is selected at EMAIL		(Blank)	×
14	APPTAG	Tag setting No.	When "TAG" is selected at APPEND		1 to 64	○
			When other than the above is selected at APPEND		(Blank)	×
15	APPLOGGING	Logging setting No.	When "LOGGING" is selected at APPEND		1 to 64	○
			When other than the above is selected at APPEND		(Blank)	×
16 to 31	EMAIL1 to EMAIL16	Destination 1 to 16＊3	When "YES" is selected at EMAIL	Mark	YES	○
				Do not mark	NO	
			When "NO" is selected at EMAIL		(Blank)	×

○ : Must be set　　× : Need not be set (Invalid)

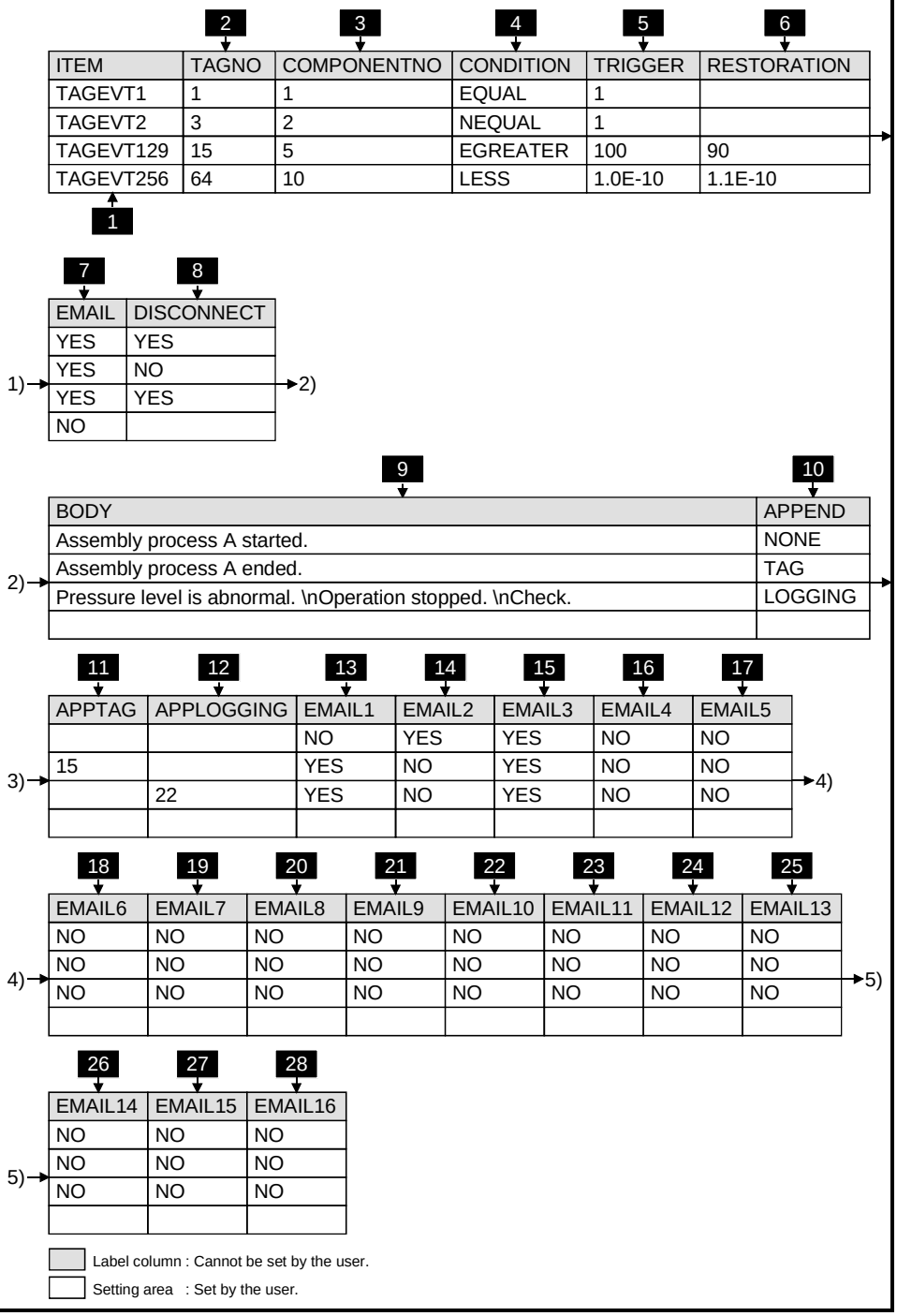
＊1 Specify the access target CPU setting No. set to the label of CPU.CSV.
An error will occur if the specified access target CPU setting No. does not exist in CPU.CSV.

＊2 Refer to Appendix 6.2 (2) for the precautions for editing the e-mail main text.

＊3 Specify the e-mail address (To:) setting No. set to the label of EMAIL.CSV.
An error will occur if the specified e-mail address (To:) setting No. does not exist in EMAIL.CSV.

Appendix 6.13 TAGEVT.CSV (Event setting - Tag event setting)

(1) File format

Item	Description
File name	TAGEVT.CSV
File contents	Event setting - Tag event setting (Refer to Section 6.5.3)
File format	

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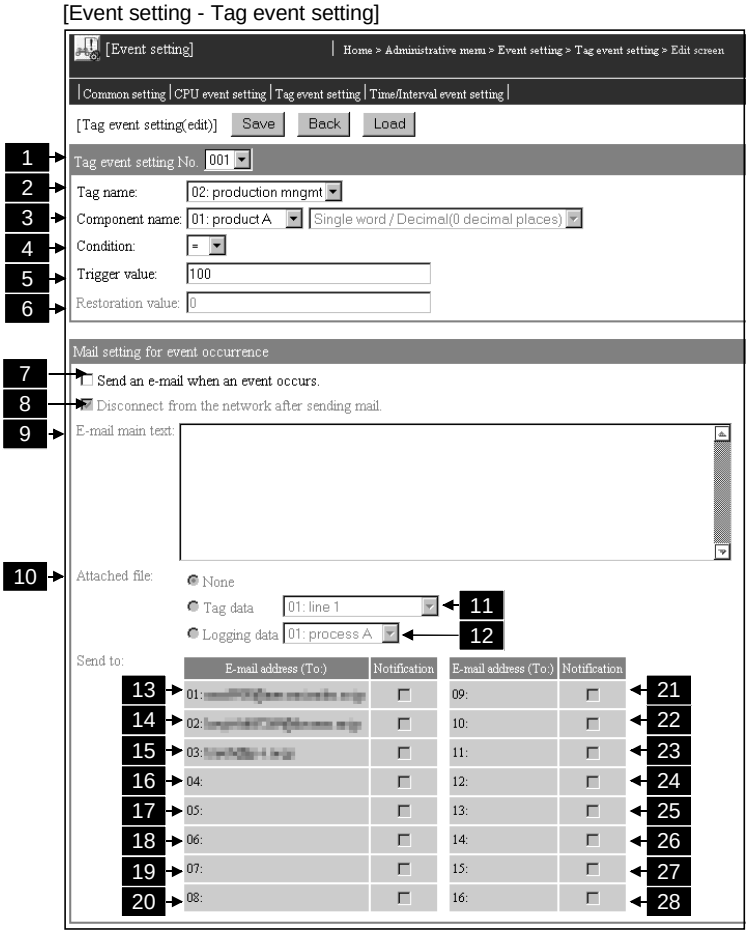
Item	Description
File format (Continued)	[Event setting - Tag event setting] 

(2) Label

	Label	Description
1	TAGEVT1 to TAGEVT256	Set the items of tag event setting No. 1 to 256. Enter only the necessary labels. (Labels that are not set need not be entered.)

(3) Setting items

	Item	Description		Set value	Setting requirement
2	TAGNO	Tag name (Tag setting No.) ∗1		1 to 64	○
3	COMPONENTNO	Component name (Component setting No.) ∗2 ∗3		1 to 64	○
4	CONDITION	Condition	=	EQUAL	○
			<>	NEQUAL	
			>	GREATER	
			>=	EGREATER	
			<	LESS	
			<=	ELESS	

○ : Must be set × : Need not be set (Invalid)

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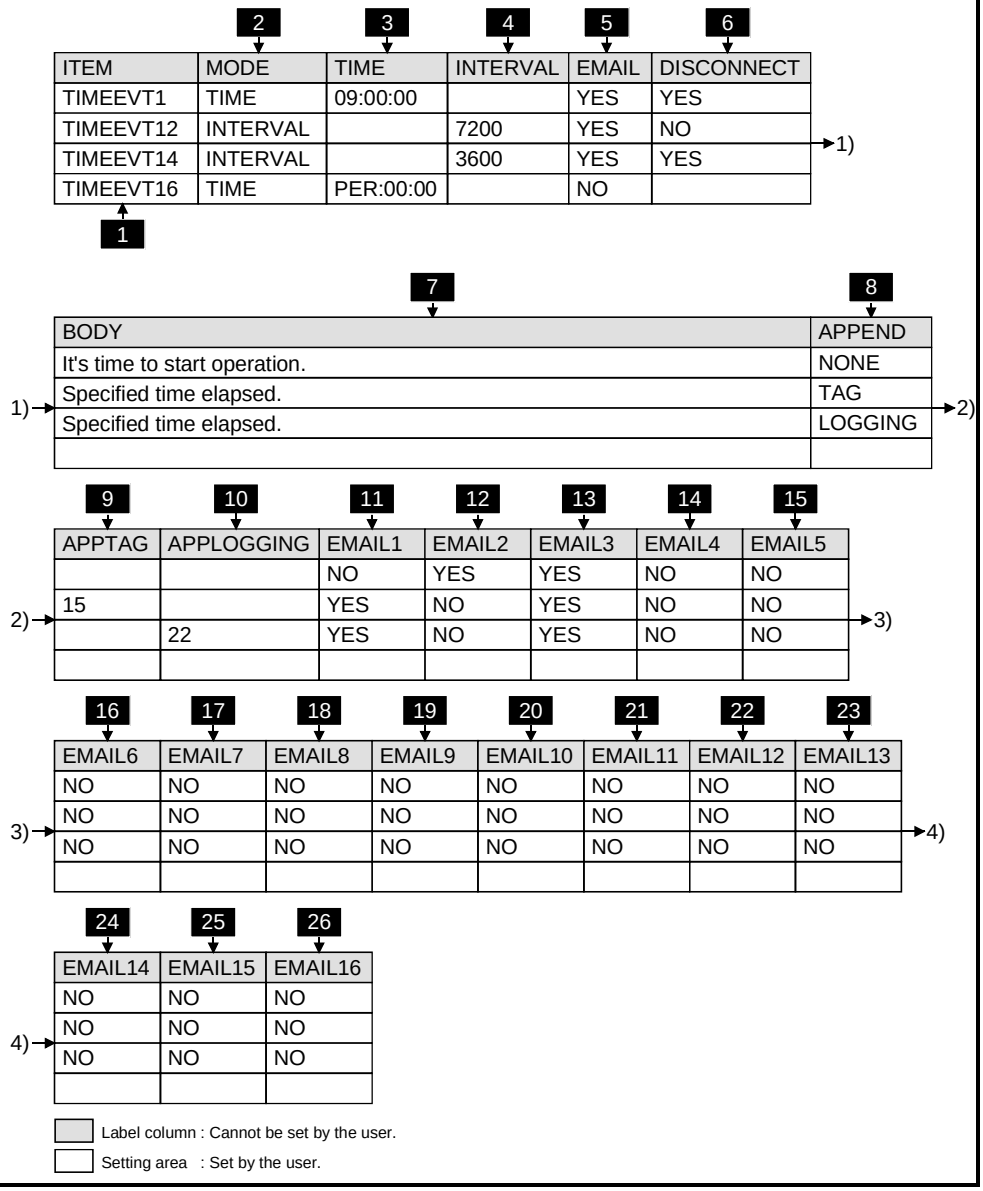
	Item	Description			Set value	Setting requirement
5	TRIGGER	Trigger value			Numerical value (integer, real number)	○
6	RESTORATION	Restoration value	When "NEQUAL" or "EQUAL" is selected at CONDITION		(Blank)	×
			When other than the above is selected at CONDITION		Numerical value (integer, real number)	○
7	EMAIL	Send an e-mail when an event occurs.	Mark		YES	○
			Do not mark		NO	
8	DISCONNECT	Disconnect from the network after sending mail	When "YES" is selected at EMAIL	Mark	YES	○
				Do not mark	NO	
			When "NO" is selected at EMAIL		(Blank)	×
9	BODY	E-mail main text ＊4	When "YES" is selected at EMAIL		0 to 256 characters	○
			When "NO" is selected at EMAIL		(Blank)	×
10	APPEND	Attached file	When "YES" is selected at EMAIL	None	NONE	○
				Tag data	TAG	
				Logging Data	LOGGING	
			When "NO" is selected at EMAIL		(Blank)	×
11	APPTAG	Tag setting No.	When "TAG" is selected at APPEND		1 to 64	○
			When other than the above is selected at APPEND		(Blank)	×
12	APPLOGGING	Logging setting No.	When "LOGGING" is selected at APPEND		1 to 64	○
			When other than the above is selected at APPEND		(Blank)	×
13 to 28	EMAIL1 to EMAIL16	Destination 1 to 16＊5	When "YES" is selected at EMAIL	Mark	YES	○
				Do not mark	NO	
			When "NO" is selected at EMAIL		(Blank)	×

○ : Must be set　　× : Need not be set (Invalid)

＊1 Specify the tag setting No. set to the label of TAG.CSV.
An error will occur if the specified tag setting No. does not exist in TAG.CSV.
＊2 Specify the component setting No. set to the label of COMPONENT.CSV.
An error will occur if the specified component setting No. does not exist in COMPONENT.CSV.
＊3 An error will occur if the data type of the specified component setting No. is "String".
＊4 Refer to Appendix 6.2 (2) for the precautions for editing the e-mail main text.
＊5 Specify the e-mail address (To:) setting No. set to the label of EMAIL.CSV.
An error will occur if the specified e-mail address (To:) setting No. does not exist in EMAIL.CSV.

Appendix 6.14 TIMEEVT.CSV (Event setting - Time/Interval event setting)

(1) File format

Item	Description
File name	TIMEEVT.CSV
File contents	Event setting - Time/Interval event setting (Refer to Section 6.5.3)
File format	

2
3
4
5
6
ITEM | MODE | TIME | INTERVAL | EMAIL | DISCONNECT
TIMEEVT1 | TIME | 09:00:00 | | YES | YES
TIMEEVT12 | INTERVAL | | 7200 | YES | NO
TIMEEVT14 | INTERVAL | | 3600 | YES | YES
TIMEEVT16 | TIME | PER:00:00 | | NO |
1)
1
7
8
BODY | APPEND
It's time to start operation. | NONE
Specified time elapsed. | TAG
Specified time elapsed. | LOGGING
1)
2)
9
10
11
12
13
14
15
APPTAG | APPLOGGING | EMAIL1 | EMAIL2 | EMAIL3 | EMAIL4 | EMAIL5
| | NO | YES | YES | NO | NO
15 | | YES | NO | YES | NO | NO
| 22 | YES | NO | YES | NO | NO
2)
3)
16
17
18
19
20
21
22
23
EMAIL6 | EMAIL7 | EMAIL8 | EMAIL9 | EMAIL10 | EMAIL11 | EMAIL12 | EMAIL13
NO | NO | NO | NO | NO | NO | NO | NO
NO | NO | NO | NO | NO | NO | NO | NO
NO | NO | NO | NO | NO | NO | NO | NO
3)
4)
24
25
26
EMAIL14 | EMAIL15 | EMAIL16
NO | NO | NO
NO | NO | NO
NO | NO | NO
4)
Label column : Cannot be set by the user.
Setting area : Set by the user.

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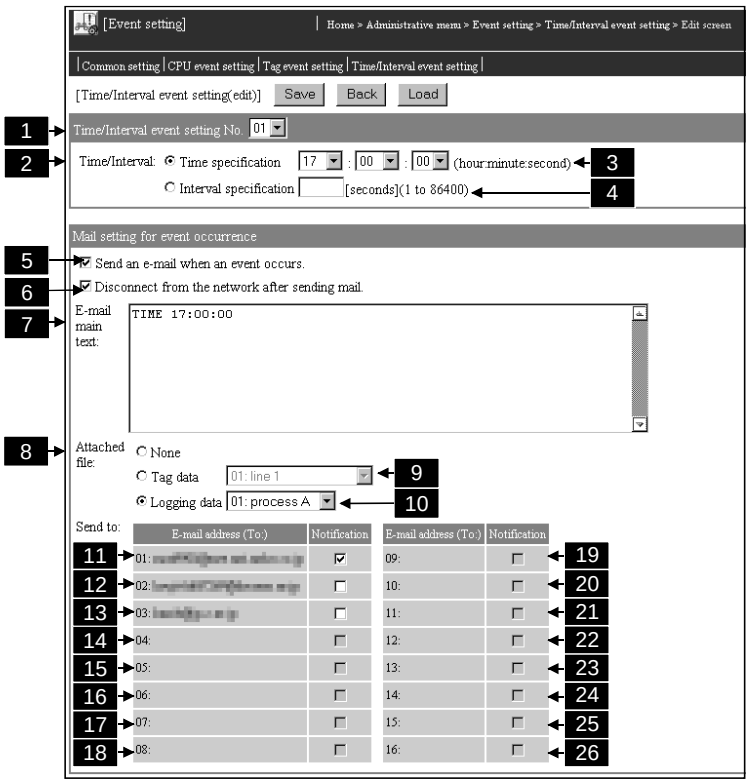
Item	Description
File format (Continued)	[Event setting - Time/Interval event setting] 

(2) Label

	Label	Description
1	TIMEEVT1 to TIMEEVT16	Set the items of time/interval event setting No. 1 to 16. Enter only the necessary labels. (Labels that are not set need not be entered.)

(3) Setting items

	Item	Description		Set value	Setting requirement
2	MODE	Time/Interval	Time specification	TIME	○
			Interval specification	INTERVAL	
3	TIME	Time	When "TIME" is selected at MODE	• Hour:Minute:Second format Hour: 00 to 23, PER Minute: 00 to 59, PER (PER can be specified for Minute only when PER is specified for Hour) Second: 00 to 59 (Example) 9:00:00, 17:00:00, PER:PER:00	○
			When "INTERVAL" is selected at MODE	(Blank)	×

○ : Must be set × : Need not be set (Invalid)

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	Item	Description			Set value	Setting requirement
4	INTERVAL	Interval	When "INTERVAL" is selected at MODE		1 to 86400 (unit: seconds)	○
			When "TIME" is selected at MODE		(Blank)	×
5	EMAIL	Send an e-mail when an event occurs.	Mark		YES	○
			Do not mark		NO	
6	DISCONNECT	Disconnect from the network after sending mail	When "YES" is selected at EMAIL	Mark	YES	○
				Do not mark	NO	
			When "NO" is selected at EMAIL		(Blank)	×
7	BODY	E-mail main text ＊1	When "YES" is selected at EMAIL		0 to 256 characters	○
			When "NO" is selected at EMAIL		(Blank)	×
8	APPEND	Attached file	When "YES" is selected at EMAIL	None	NONE	○
				Tag data	TAG	
				Logging Data	LOGGING	
			When "NO" is selected at EMAIL		(Blank)	×
9	APPTAG	Tag setting No.	When "TAG" is selected at APPEND		1 to 64	○
			When other than the above is selected at APPEND		(Blank)	×
10	APPLOGGING	Logging setting No.	When "LOGGING" is selected at APPEND		1 to 64	○
			When other than the above is selected at APPEND		(Blank)	×
11 to 26	EMAIL1 to EMAIL16	Destination 1 to 16＊2	When "YES" is selected at EMAIL	Mark	YES	○
				Do not mark	NO	
			When "NO" is selected at EMAIL		(Blank)	×

○ : Must be set × : Need not be set (Invalid)

＊1 Refer to Appendix 6.2 (2) for the precautions for editing the e-mail main text.
＊2 Specify the e-mail address (To:) setting No. set to the label of EMAIL.CSV.
An error will occur if the specified e-mail address (To:) setting No. does not exist in EMAIL.CSV.

Appendix 6.15 ADDRESS.CSV (Address notification setting)

(1) File format

Item	Description
File name	ADDRESS.CSV
File contents	Address notification setting (Refer to Section 6.9.2)
File format	

1	IPTYPE	SYSTEM
2	IPADDRESS	
3	PORTTYPE	SYSTEM
4	PORT	
5	ECONNECTION	YES
6	EMAIL1	YES
7	EMAIL2	YES
8	EMAIL3	NO
9	EMAIL4	YES
10	EMAIL5	YES
11	EMAIL6	YES
12	EMAIL7	YES
13	EMAIL8	YES
14	EMAIL9	YES
15	EMAIL10	YES
16	EMAIL11	YES
17	EMAIL12	YES
18	EMAIL13	YES
19	EMAIL14	YES
20	EMAIL15	YES
21	EMAIL16	YES
22	WMSEND	NO
23	EVENT	YES
24	FCONNECTION	NO
25	SERVER1	
26	SERVER2	
27	SERVER3	
28	SERVER4	
29	SERVER5	
30	SERVER6	
31	SERVER7	
32	SERVER8	
33	SERVER9	
34	SERVER10	
35	SERVER11	
36	SERVER12	
37	SERVER13	
38	SERVER14	
39	SERVER15	
40	SERVER16	
41	FILENAME	QJ71WS96
42	LINK	QJ71WS96

Label column : Cannot be set by the user.
Setting area : Set by the user.

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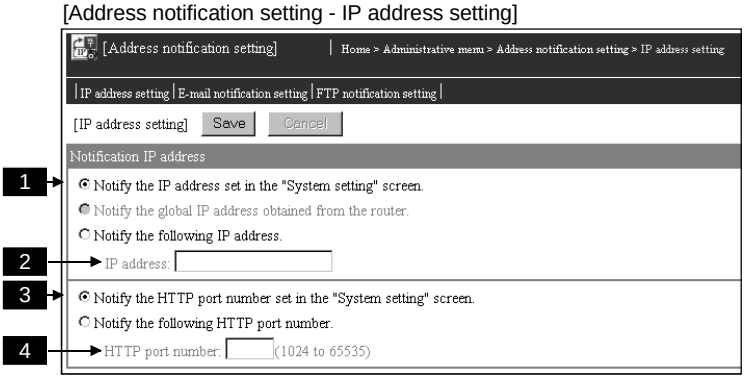
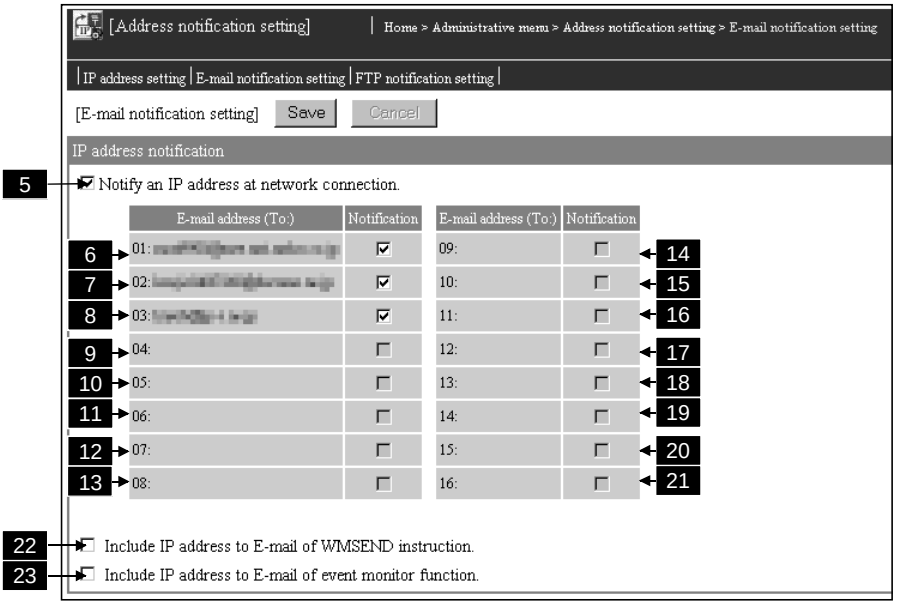
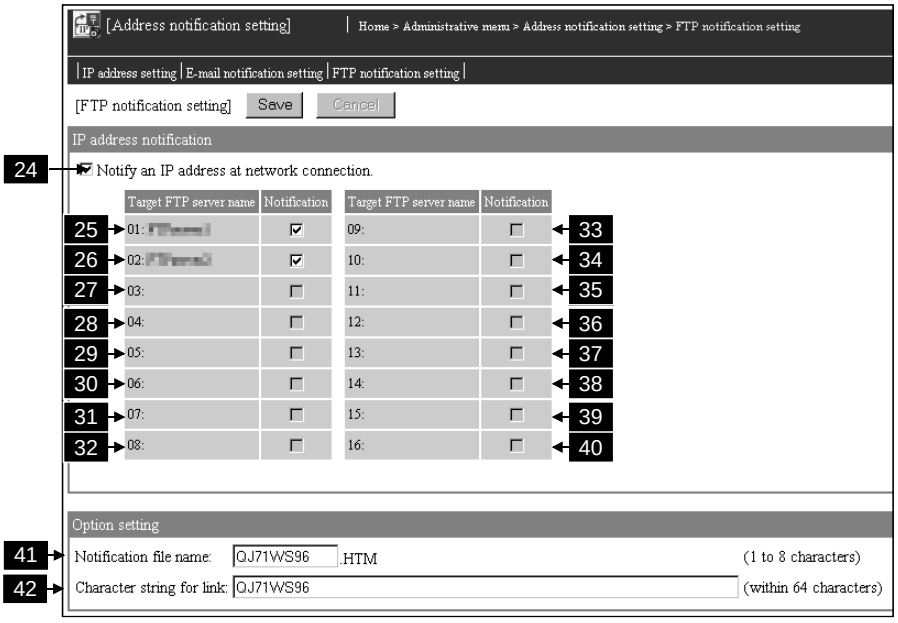
Item	Description
File format (Continued)	[Address notification setting - IP address setting]  [Address notification setting - E-mail notification setting]  [Address notification setting - FTP notification setting] 

[Address notification setting]
Home > Administrative menu > Address notification setting > IP address setting
IP address setting | E-mail notification setting | FTP notification setting
[IP address setting] Save Cancel
Notification IP address
1
Notify the IP address set in the "System setting" screen.
Notify the global IP address obtained from the router.
Notify the following IP address.
2
IP address:
3
Notify the HTTP port number set in the "System setting" screen.
Notify the following HTTP port number.
4
HTTP port number: (1024 to 65535)

[Address notification setting]
Home > Administrative menu > Address notification setting > E-mail notification setting
IP address setting | E-mail notification setting | FTP notification setting
[E-mail notification setting] Save Cancel
IP address notification
5
Notify an IP address at network connection.
E-mail address (To:) Notification E-mail address (To:) Notification
6 01: 09: 14
7 02: 10: 15
8 03: 11: 16
9 04: 12: 17
10 05: 13: 18
11 06: 14: 19
12 07: 15: 20
13 08: 16: 21
22
Include IP address to E-mail of WMSEND instruction.
23
Include IP address to E-mail of event monitor function.

[Address notification setting]
Home > Administrative menu > Address notification setting > FTP notification setting
IP address setting | E-mail notification setting | FTP notification setting
[FTP notification setting] Save Cancel
IP address notification
24
Notify an IP address at network connection.
Target FTP server name Notification Target FTP server name Notification
25 01: 09: 33
26 02: 10: 34
27 03: 11: 35
28 04: 12: 36
29 05: 13: 37
30 06: 14: 38
31 07: 15: 39
32 08: 16: 40
Option setting
41
Notification file name: QJ71WS96 .HTM (1 to 8 characters)
42
Character string for link: QJ71WS96 (within 64 characters)

(2) Label

	Label	Description		Set value	Setting requirement
1	IPTYPE	Notification IP address	Notify the IP address set in the "System setting" screen.	SYSTEM	○
			Notify the global IP address obtained from the router	ROUTER	
			Notify the following IP address.	FOLLOWING	
2	IPADDRESS	IP address	When "FOLLOWING" is selected at IPTYPE	IP address (decimal)	○
			When other than the above is selected at IPTYPE	(Blank)	×
3	PORTTYPE	Notification HTTP port number	Notify the HTTP port number set in the "System setting" screen.	SYSTEM	○
			Notify the following HTTP port number.	FOLLOWING	
4	PORT	HTTP port number	When "SYSTEM" is selected at PORTTYPE	(Blank)	×
			When "FOLLOWING" is selected at PORTTYPE	1024 to 65535	○
5	ECONNECTION	Notify an IP address at network connection.	Mark	YES	○
			Do not mark	NO	
6 to 21	EMAIL1 to EMAIL16	E-mail address (To:) 1 to 16*1	When "YES" is selected at ECONNECTION: Mark	YES	○
			When "YES" is selected at ECONNECTION: Do not mark	NO	
			When "NO" is selected at ECONNECTION	(Blank)	×
22	WMSEND	Include IP address to E-mail of WMSEND instruction.	Mark	YES	○
			Do not mark	NO	
23	EVENT	Include IP address to E-mail of event monitor function.	Mark	YES	○
			Do not mark	NO	
24	FCONNECTION	Notify an IP address at network connection.	Mark	YES	○
			Do not mark	NO	

○ : Must be set × : Need not be set (Invalid)

	Label	Description			Set value	Setting requirement
25 to 40	SERVER1 to SERVER16	Target FTP server name 1 to 16*2	When "YES" is selected at FCONNECTION	Mark	YES	○
				Do not mark	NO	
			When "NO" is selected at FCONNECTION		(Blank)	×
41	FILENAME	Notification file name			1 to 8 characters	○
42	LINK	Character string for link			within 64 characters	○

○ : Must be set × : Need not be set (Invalid)

*1 Specify the e-mail address (To:) setting No. set to the label of EMAIL.CSV.
An error will occur if the specified e-mail address (To:) setting No. does not exist in EMAIL.CSV.

*2 Specify the FTP server setting No. set to the label of FTP.CSV.
An error will occur if the specified FTP server setting No. does not exist in FTP.CSV.

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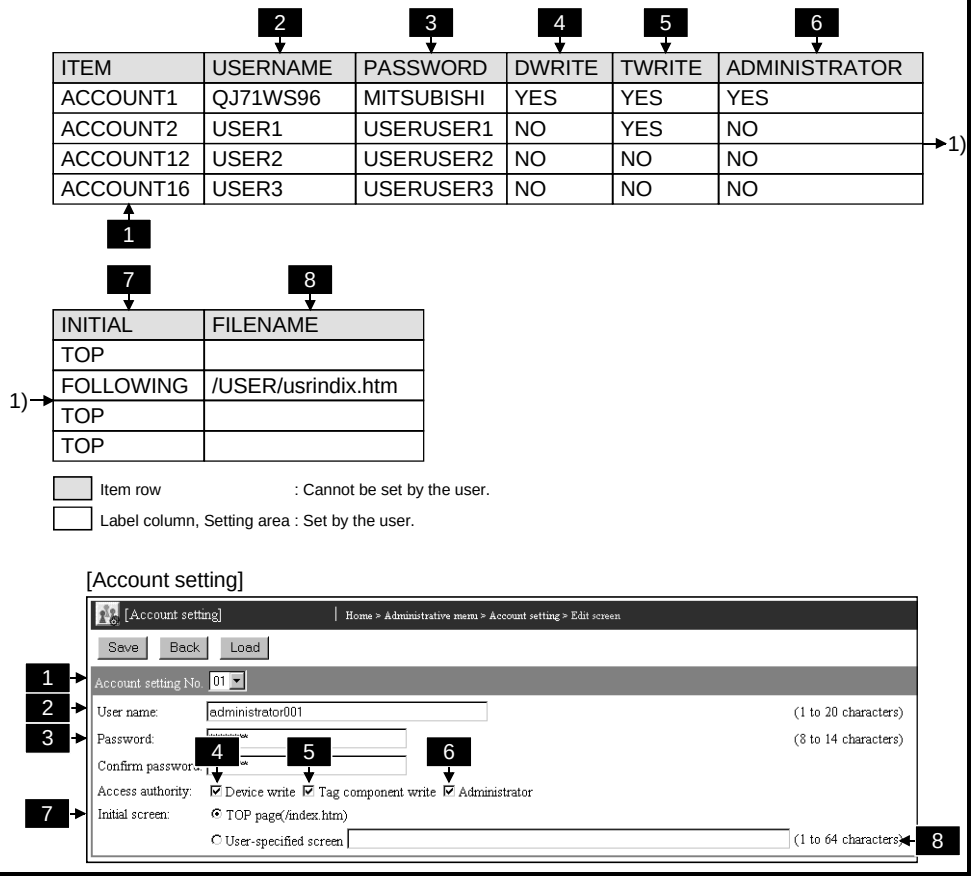
Appendix 6.16 ACCOUNT.CSV (Account setting)

(1) File format

Item	Description
File name	ACCOUNT.CSV
File contents	Account setting (Refer to Section 4.6.5)
File format	

(2) Label

	Label	Description
1	ACCOUNT1 to ACCOUNT16	Set the items of account setting No. 1 to 16. Enter only the necessary labels. (Labels that are not set need not be entered.)

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(3) Setting items

	Item	Description		Set value	Setting requirement
2	USERNAME	User name		1 to 20 characters	○
3	PASSWORD	Password		8 to 14 characters	○
4	DWRITE	Access authority: Device write	Mark	YES	○
			Do not mark	NO	
5	TWRITE	Access authority: Tag component write	Mark	YES	○
			Do not mark	NO	
6	ADMINISTRATOR	Access authority: Administrator ＊1	Mark	YES	○
			Do not mark	NO	
7	INITIAL	Initial screen	Top page (/index.htm)	TOP	○
			User-specified screen	FOLLOWING	○
8	FILENAME	Initial file name	When "TOP" is selected at INITIAL	(Blank)	○
			When "FOLLOWING" is selected at TOP	1 to 64 characters	○

○ : Must be set　　× : Need not be set (Invalid)

＊1 An error will occur if no user with administrator authority has been set.

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Appendix 6.17 IPFILTER.CSV (IP filter setting)

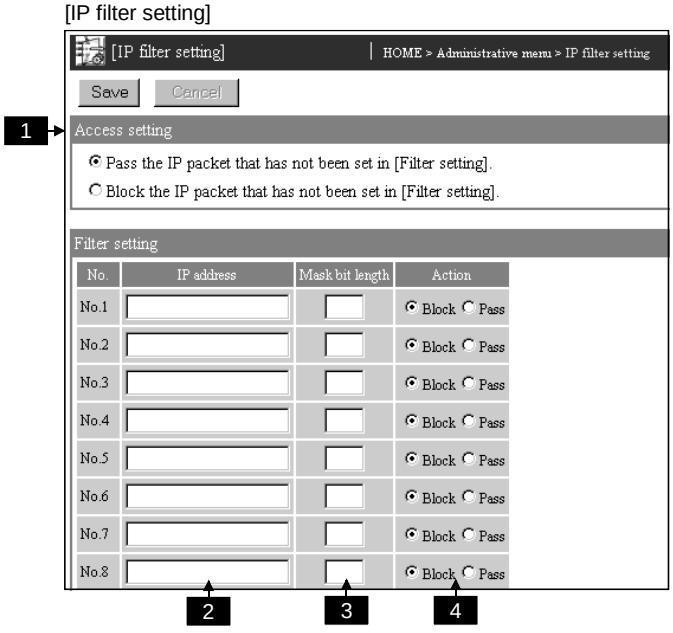
(1) File format

Item	Description
File name	IPFILTER.CSV
File contents	IP filter setting (Refer to Section 4.6.6)
File format	

1	ACCESS	BLOCK
2	IPADDRESS1	192.168.0.0
3	MASK1	16
4	FILTER1	PASS
	IPADDRESS2	10.20.30.00
	MASK2	24
	FILTER2	PASS
	IPADDRESS3	10.20.30.40
	MASK3	32
	FILTER3	BLOCK
	IPADDRESS4	
	MASK4	
	FILTER4	
	IPADDRESS5	10.20.30.50
	MASK5	32
	FILTER5	BLOCK
	≈	≈
	IPADDRESS32	
	MASK32	
	FILTER32	

Label column : Cannot be set by the user.
Setting area : Set by the user.

[IP filter setting]



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(2) Label

	Label	Description			Set value	Setting requirement
1	ACCESS	Access setting	Pass the IP packet that has not been set in [Filter setting].		PASS	○
			Block the IP packet that has not been set in [Filter setting].		BLOCK	
2	IPADDRESS1 to IPADDRESS32	Filter setting No. 1 to 32 ＊1	IP address		IP address (decimal), or (Blank)	○
3	MASK1 to MASK32		Mask bit length		1 to 32 or (Blank)	○
4	FILTER1 to FILTER32		Action	Block	BLOCK, or (Blank)	○
				Pass	PASS, or (Blank)	

○ : Must be set　　× : Need not be set (Invalid)

＊1 IPADDRESSn, MASKn and FILTERn (n: 1 to 32) in the IP filter setting can all be blanked.
However, if any one of the three has been set, the other two must also be set. (They cannot be blanked.)

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Appendix 7 Sizes of Data Written to Standard ROM and Compact Flash™ Card

This section explains how to calculate the sizes of data written to the standard ROM and Compact Flash™ card.

Appendix 7.1 Size of data written to standard ROM drive

The size of the data written to the standard ROM drive per day can be calculated as shown below.

	Formula
Size of data written to standard ROM drive per day (∗1)	$= (LS_1 \times LN_1) + \cdots + (LS_n \times LN_n)$ $+ (CPES \times CPEN) + (TGES \times TGEN) + (TMES \times TMEN) + (FSS \times FSN)$

∗1 Only the loggings which storage location is set to the standard ROM are counted.

LS_n: Size of logging No.n data written to the logging file at one time (Refer to Appendix 7.3.)
LN_n: No. of writes of logging No.n per day (Refer to Appendix 7.3.)
CPES: Size of data written to the event history file in the case where a CPU event occurs (Refer to Appendix 7.4.)
CPEN: No. of CPU events occurred per day
TGES: Size of data written to the event history file in the case where a tag event occurs (Refer to Appendix 7.4.)
TGEN: No. of tag events occurred per day
TMES: Size of data written to the event history file in the case where a time/interval event occurs (Refer to Appendix 7.4.)
TMEN: No. of time/interval events occurred per day
FSS: Size of data written to the file by FTP server function (Refer to Appendix 7.6.)
FSN: No. of writes to the file by FTP server function per day

Appendix 7.2 Size of data written to Compact Flash™ card

The size of the data written to the Compact Flash™ card per day can be calculated as shown below.

	Formula
Size of data written to Compact Flash™ card per day (∗1) (∗2) (∗3)	$= ((\underline{LS_1} + 1024) \times LN_1) + \cdots + ((\underline{LS_n} + 1024) \times LN_n)$ $+ ((\underline{WFS} + 1024) \times WFN) + ((\underline{FCS} + 1024) \times FCN) + ((\underline{FSS} + 1024) \times FSN)$

∗1 Only the loggings which storage location is set to the Compact Flash™ card are counted.
∗2 Round up the underlined parts to multiples of 512.
Example) When $LS_n = 600$, $\underline{LS_n} = 1024$
∗3 When writing data to a file, data of 1024 bytes are generally rewritten due to file system update.

LSn: Size of logging No.n data written to the logging file at one time (Refer to Appendix 7.3.)
LNn: No. of writes of logging No.n per day (Refer to Appendix 7.3.)
WFS: Size of data written to the file using the WFWRITE instruction (Refer to Appendix 7.5.)
WFN: No. of file writings using the WFWRITE instruction per day
FCS: Size of data written to the file using the FTPGET instruction (FTP client function) (Refer to Appendix 7.5.)
FCN: No. of file writings using the FTPGET instruction (FTP client function) per day
FSS: Size of data written to the file by FTP server function (Refer to Appendix 7.6.)
FSN: No. of writes to the file by FTP server function per day

Appendix 7.3 Size of data written to logging file

The size of data written to the logging file can be obtained from the following.

	Formula
Logging cycle is 1 second or more.	LS_n = Time character string length (19) + Comma (1) + TAGL + Line feed (1) $LN_n = LT_n/INT_n$ TAGL = Component 1 character string length (∗2) + Comma (1) + Component 2 character string length (∗2) + Comma (1) + ⋯ + Component n character string length (∗2) + Line feed (1)
Logging cycle is less than 1 second. (High-speed logging) (∗1)	LS_n = (Time character string length (19) + Comma (1) + TAGL + Line feed (1)) / INT_n $LN_n = LT_n$ TAGL = Component 1 character string length (∗2) + Comma (1) + Component 2 character string length (∗2) + Comma (1) + ⋯ + Component n character string length (∗2) + Line feed (1)

∗1 When high-speed logging is used, data are stored to the Compact Flash™ card once per second.

∗2 The character string length of the component is based on the data type set in the component setting as shown below.

Data type	Data length	Remarks
Single word	1 to 18	Depends on the specified device value, display form, and operator specification.
Double word	1 to 21	
Real number	1 to 47	
Bit	1	—
String	1 to 32	Depends on the specified number of characters.

(Example) When a normal logging setting is made to collect 64 components whose data type is "Single word";
LSn = 19 + 1 + (18 + 1) × 64 + 1 = 1237 bytes

LS_n: Size of logging No.n data written to the logging file at one time

LN_n: No. of writes of logging No.n per day

LT_n: Operating time (seconds) of logging No.n per day (In the case of constant operation, LTn = 86400)

INT_n: Logging cycle (seconds)
For the high-speed logging, the unit needs to be changed from milliseconds to seconds.
Example) For the interval of 100 milliseconds, INTn = 0.1 (seconds)

TAGL: Character string length of tag data

Appendix 7.4 Size of data written to event history file

The size of data written to the event history file can be obtained from the following.

	Formula
Size of data written to event history file	CPES = Data character string length (19) + Event number (2) + Status (11) + CPU name (1 to 16) + Operation status (12) + E-mail sending (8) + Comma/Line feed (7)
	TGES = Data character string length (19) + Event number (2) + Status (11) + Tag name (1 to 16) + Component name (1 to 16) + Condition (2) + Trigger value (1 to 47) + Component value (1 to 47) + E-mail sending (8) + Comma/Line feed (10)
	TMES = Data character string length (19) + Event number (2) + E-mail sending (8) + Comma/Line feed (4)

CPES: Size of data written to the event history file in the case where a CPU event occurs

TGES: Size of data written to the event history file in the case where a tag event occurs

TMES: Size of data written to the event history file in the case where a time/interval event occurs

Appendix 7.5 Size for file writing by dedicated instruction

The size of data written to the file by a dedicated instruction can be obtained from the following.

(1) WFWRITE instruction

		Formula
Binary writing		WFS = DTN × 2
CSV format conversion	Word specification	WFS = (Data character string length (∗1) + Comma (1)) × DTN + Line feed (1) × LINE LINE = DTN / No. of columns
	Byte specification	WFS = (Data character string length (∗2) + Comma (1)) × DTN x 2 + Line feed (1) × LINE LINE = (DTN × 2) / No. of columns

∗1 Data character string length is 1 to 6 depending on the specified device value.
∗2 Data character string length is 1 to 4 depending on the specified device value.

WFS: Size of data written to the file by the WFWRITE instruction
DTN: No. of request data to be written (in units of words)
LINE: No. of lines

(2) FTPGET instruction

Formula
FCS = File size specified by the FTPGET instruction

FCS: Size of the file to which data are written by the FTPGET instruction (FTP client function)

Appendix 7.6 Size of data written to file by FTP server function

The size of data written to the file by the FTP server function can be obtained from the following.

Formula
FSS = Size of the file which transfer is specified on the FTP client side

FSS: Size of the file written by the FTP server function

Appendix 8 Transportation Precautions

When transporting lithium batteries, make sure to treat them based on the transport regulations

Appendix 8.1 Target models of regulations

The batteries for the Web server module are classified as follows:

Product name	Model	Product supply status	Classification for transportation
Q series battery	Q6BAT	Lithium battery	Non-dangerous goods

Appendix 8.2 Transport guidelines

Comply with IATA Dangerous Goods Regulations, IMDG code and the local transport regulations when transporting products after unpacking or repacking, while Mitsubishi ships products with packages to comply with the transport regulations.
Please consult your carrier for further details.

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